

S.

OPERATIONS

OF THE

ZHOB FIELD FORCE

UNDER

MAJOR-GENERAL SIR G. S. WHITE, K.C.B., K.C.I.E., V.C.,

IN

1890.

COMPILED FROM OFFICIAL SOURCES (UNDER THE ORDERS OF THE QUARTER-MASTER
GENERAL IN INDIA)

ZHOB

BY

CAPTAIN A. H. MASON, D.S.O., R.E.,

LATE DEPUTY ASSISTANT QUARTER-MASTER GENERAL FOR INTELLIGENCE, ZHOB FIELD FORCE.



SIMLA :

PRINTED AT THE GOVERNMENT CENTRAL PRINTING OFFICE.


1892.

M 610

M 37023

M 37023

UNITED SERVICE INSTITUTION
OF INDIA

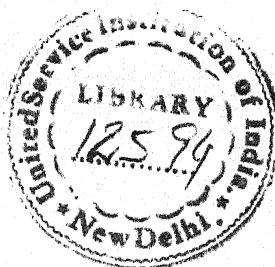


LIBRARY

CLASS NO. 954.23
BOOK NO. M.A.S.
ACCESSION NO. 12594

Acc 125
Class No

1 bag in pocket



This paper is transmitted for the personal
information of.....

.....
.....

by direction of His Excellency the Com-
mander-in-Chief in India, and is to be
considered Secret.

Custody and disposal of secret books, reports, &c., issued by the Intelligence Branch, Qr. Mr. Genl.'s Dept. in India.

The attention of His Excellency the Commander-in-Chief having been called to the want of system in the custody, use and disposal of secret works, &c., His Excellency desires that in future the following regulations may be strictly adhered to:—

(a) Officials to whom works of a secret nature are issued, will be held personally responsible for their safe custody, and they must be very careful to keep them under lock and key: and under no circumstances to leave them where they are likely to be observed by people who should have no access to them. They will submit half-yearly (on the 1st January and 1st July) to the Intelligence Branch a return showing that such matter is still in their possession.

(b) When an official to whom a secret work has been issued vacates his appointment or is transferred or proceeds on duty or leave (out of India for any period, or in India for any period exceeding 3 months), all secret works in his possession if held in his official capacity must be personally made over to his successor (be he temporary or permanent), and a report submitted to the Intelligence Branch by the officer handing over the issues showing that this has been done. The following is the form of report to be made:—

Certified that I have this day delivered over to....., the following secret works issued to me by the Intelligence Branch—

No.	Full Title of work.	No. of Vols.	No. of copies.	REMARKS. Explaining reason of handing over.

Place and date.

Signature.....

Signature of receiving officer.....

In the case of officers of the District Staff these reports must be sent through the G. O. C.

(c) In the case of an official leaving his station under circumstances other than above stated, it is optional for him to hand over the secret works in his charge to another officer with the above prescribed formalities, but if he does not do so, he is as responsible for them during his absence as he is during his presence at his station.

(d) Personal or complimentary issues of secret works will be held by the recipient until his departure from India, when the secret matter will be returned to the Intelligence Branch for safe custody, or special permission obtained for its retention.

ARMY HEAD QUARTERS, }
Simla, 1st October 1891.

JAMES BROWNE, Major-General,
Quarter Master General in India.

PREFACE.

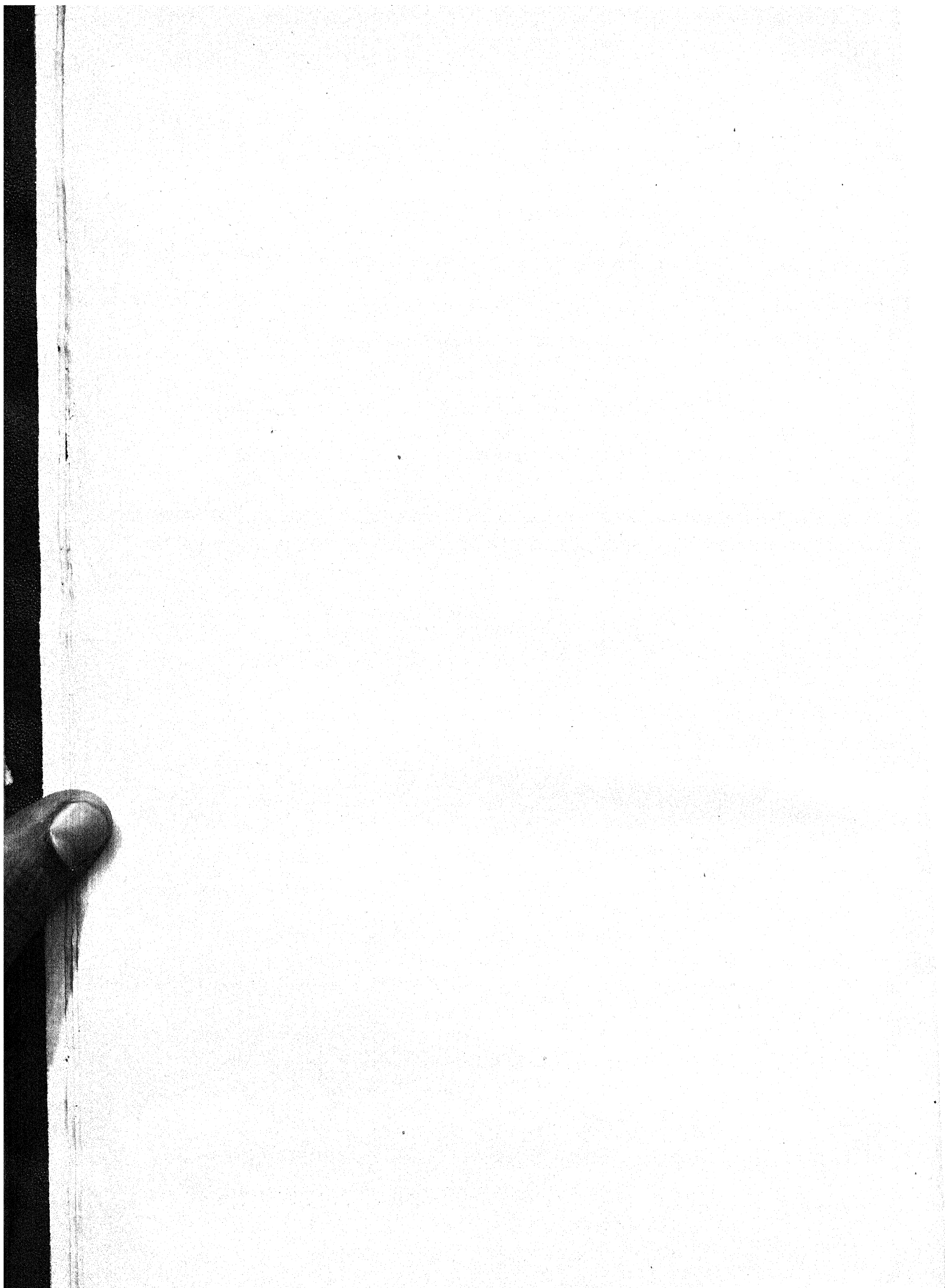
THE following account of the operations of the late Zhob Field Force is compiled from official sources. A short *resumé* of the previous measures taken by the Government of India for extending British influence in Zhob and for the opening of the Gomal pass is also given to elucidate the position of affairs which led to the despatch of the recent expedition. It has been necessary to make this report "confidential," owing to the map of the Zhob and Kunder valleys which accompanies it being considered so, and also to the fact that certain confidential papers have been used in its compilation.

(Sd.) A. H. MASON, *Captain,*

*late Deputy Assistant Quarter-Master General
for Intelligence, Zhob Field Force.*

SIMLA ;
1st December 1891.

} (Sd.) R. G. WOODTHORPE, *Colonel,*
*Deputy Quarter-Master General,
Intelligence Branch.*



CONTENTS.

— 00 —

	PAGE.
Previous measures taken for extending British influence in Zhob and for the opening of the Gomal pass	1
Gomal survey expedition, February 1888	1
Sir Robert Sandeman's visit to the Zhob valley, November 1888	2
Sir Robert Sandeman's tour through the Zhob and Gomal valleys, 1889-90	2
Proposals for punitive expedition against the Khiddarzai Sheranis and visit to the northern Kakar country sanctioned	5
Formation of Zhob Field Force	6
First phase of the operations	7
Advance from the Zhob valley to Thanishpa	8
Thanishpa to Apozai	10
Second phase of the operations	13
Advance into the Sherani country	14
Occupation of Namar Kalan	17
Opposition offered to Colonel Ross's advance up the Khiddarzai Dhana	18
Ascent of the Takht-i-Suliman	19
Terms imposed on the Sheranis	20
Termination of the operations and break up of the force	21
Final settlement made with the Larga division of the Sheranis	24
Sir George White's despatch on the result of the operations	25
 <i>Appendices.</i>	
A—Detail of Staff	i
B—Note on the Lowanas by Captain MacIvor	ii
C—Proclamation issued to the Khiddarzai headman by the Chief Political Officer on the 28th October 1890	iv
D—Return of strength of the Zhob Field Force, 30th October 1890	v
E—Notes on a tour of exploration through the Sultanzai and Hassan Khel Sherani countries by Mr. L. W. King, C.S.	vi
F—Report on the Zao and Gat routes in the Sherani country through the Suliman range	xii
G—Translation of an agreement, dated 23rd March 1891, entered into by the Largawal Sheranis	xiv
H—A brief account of the principal customs prevailing amongst the Sheranis by Mr. L. W. King, C.S.	xvi
I—Statement showing main sub-divisions, sections, sub-sections, names of <i>maliks</i> and names of villages with number of houses and fighting men in each of the Sherani tribe	xxi

	PAGE.
J—Various reports connected with the working of departments, &c., submitted on the termination of the expedition	xxviii
K—Report on survey operations	xliv
L—Statement showing the transport animals employed	liii
M—Routes followed by the different columns of the Zhob Field Force	liv
N—Detailed reports of new routes followed by the Zhob Field Force ..	lx

LIST OF MAPS AND SKETCHES.

Maps.

Map to illustrate operations of Zhob Field Force, 1890, during the first phase of the expedition	In pocket.
Skeleton map to illustrate operations of Zhob Field Force, 1890, against the Sherani tribe	Do.

Sketches.

	PAGE.
Bengal's peak, Thanishpa	8
Husain Nika Ziarat	12
View of the Takht-i-Suliman range from foot of the Atsu Kotal	14
General view of Maramazh (8,310') from camp Namar Kalan	14
In the Chuhar Khel Dhana	16
Do. do.	16
View in the Khiddarzai Dhana above Karam Hezai looking up towards Khushbina	18
Looking up the river bed at Karam Hezai	18
View on the Vihowa river, 25th November 1890	20
View of Misri Roh (10,200') from camp Kaiwahan	22

M 610

OPERATIONS OF THE ZHOB FIELD FORCE

UNDER
MAJOR-GENERAL SIR G. S. WHITE, K.C.B., K.C.I.E., V.C.,
IN
1890.

In order to properly understand the position of affairs previous to the despatch of the late expedition from Quetta through the Zhob and Kundar valleys to the Sherani country, it will be necessary to go somewhat into detail with reference to the previous measures taken for extending British influence in Zhob and for the opening of the Gomal pass.

Measures taken previous to the recent expedition for extending British influence in Zhob and for the opening of the Gomal pass.

Up to the year 1889 the knowledge of the Gomal pass and its communications with Zhob and Afghanistan possessed by the Government of India was very incomplete and rested almost entirely on native sources. It was known that this route was the great highway of Afghan traders (Pawindahs) between Central Asia and Hindustan, and its importance as a military line of communication had been long recognised. Lieutenant Broadfoot in 1839 traversed it from Ghazni with a caravan of Pawindahs. In 1878 the then Deputy Commissioner of Dera Ismail Khan (Major Macaulay) went some 30 miles up the pass and negotiations were opened by him for its pacification. These were unfortunately brought to a close by the Mahsud raid on Tank in 1879, which led to the Mahsud Waziri expedition in 1881. In 1883 arrangements were made for the exploration of the pass under tribal escort; and this was successfully carried out by a native surveyor (Yusaf Sharif) who succeeded in making a good survey of the route up to the junction of the Zhob and Gomal streams, about 24 miles beyond our border. At the time of the Zhob expedition in 1884 it was proposed to make a simultaneous exploration of the Gomal, but this proposal was negatived by the Government of India.

In 1887 the subject was again brought forward, and it was decided by the Supreme Government that a complete examination of the Gomal route, as far as Domandi, the junction of the Kundar and Gomal rivers, should be undertaken in the course of the following cold weather. For reasons not necessary to enter into here, it was decided that it was undesirable to carry out the exploration under the protection of British troops (the course recommended by the local authorities), and it was also considered that satisfactory results would not be obtained if the work was done secretly by native surveyors, and the only other course open was to allow a reconnaissance to be made openly by British officers under tribal escort. Arrangements were accordingly commenced, and Mr. Ogilvie, Deputy Commissioner of Dera Ismail Khan, went up the pass in October 1887 as far as Spin to see for himself whether the project was feasible. From what he saw he considered that the reconnaissance could be carried out on the lines proposed, but at the same time he pointed out that it would not be altogether free from risk. The

Failure of the Gomal survey expedition, February 1888.

proposals submitted by him were approved by Government; and on the 6th

Mr. G. M. Ogilvie, Deputy Commissioner of Dera Ismail Khan.

Captain R. A. Wahab, R. E., Survey Officer.

Captain A. H. Mason, R. E., and Lieutenant J. W. C. Hutchinson, 6th Punjab Infantry, Intelligence Officers.

February 1888 the expedition started from Dera Ismail Khan towards the frontier. The party consisted of the officers named in the margin. Mr. Ogilvie was in charge of the political arrangements. These were, stated briefly, that the different tribes

should be responsible for the safe conduct of the party through their respective limits, for certain pecuniary rewards, the amounts of which were stipulated. The Mahsud Waziris were to be responsible for the safety of the party as far as Khajuri Kach, and were to provide an escort of 150 foot and 12 horsemen; the latter to be influential *maliks* of the tribe. Beyond Khajuri Kach the safety of the party was to be entrusted to the Zalli Khel Waziris, Dotanis and Suliman Khel Ghilzais, and suitable arrangements were made with these tribes. The Nasar Pawindahs, who claimed proprietary right in the lands of the Spin valley, were at the same time included in the arrangements. A small body of police accompanied the party as a guard to the camp, and the Deputy Commissioner also took with him a few influential native gentlemen of the Dera Ismail Khan district.

The whole party arrived at Tank on the 8th February. Here a large number of Waziris were found collected, their numbers eventually amounting to from two to three thousand armed men. The attitude of the tribe from the first was not satisfactory. They had brought down in the *jirga* two criminals (Marwatis) who had escaped from our territory. These the Deputy Commissioner had seized, and the same evening they were sent back to the hills. On the night of the 9th February a murder was committed in a village near Tank, which was traced to Mahsud Waziris. The presence of so many armed men in the city was a source of danger, and at one time it looked as if it would be necessary to use force to get rid of them. Moreover, the Mahsuds now brought forward fresh demands which were impracticable, and the negotiations threatened to break down altogether. These were, however, eventually brought to a conclusion, and on the 20th February the party moved to Gomal, where the camp was pitched outside the village near the *thana*. During the night three shots were fired in rapid succession into the camp at short range, one bullet went through Mr. Ogilvie's tent, and the others through the tents occupied by the police guard. The perpetrators of this outrage at once made off to the hills, covered by the darkness, but they were known to belong to the Abdul Rahman Khel section of the Mahsuds, who were dissatisfied with the arrangements made with the tribe. In spite of this occurrence the Deputy Commissioner considered it was still practicable to go on and the expedition started on the 21st February and halted on that day at a place about a mile beyond the border. About 800 Mahsuds accompanied the party, and there was some pilfering of supplies. The following day at Nilai Kach a riot took place between the Mahsuds and the Zalli Khel accompanying the camp, in which some 12 men were severely wounded mostly on the side of the Zalli Khel. On the following morning (23rd February) the Mahsuds were told either that they must instantly reduce their numbers, or that the expedition would withdraw. There was a pretence of obedience, but it soon appeared that the hills were full of robbers; that tribal resistance was in all probability being organized; and that even if the expedition proceeded survey operations would be impossible. That night several shots were fired into the camp from the neighbouring hills, and the next morning it was decided to retire. This was done by the Sheranna pass, the Mahsuds at the same time being ordered to move off by the Gomal route, which order after a few minutes menacing hesitation they obeyed.

The explanation of the failure of this expedition was attributed to various causes, the principal being the anarchical condition of the tribe, their poverty and the weakness of the expedition. The temptation for extortion was no doubt too great for their nature to withstand. The Commissioner of the Derajat in reporting its failure made certain recommendations for carrying out with a military force, during the winter of 1888-89, the survey and permanent

pacification of the Gomal pass, but the consideration of these proposals was postponed, and nothing further was done in the matter until 1889.

In the meantime, in November 1888, with the permission of the Government of India, Sir Robert Sandeman accompanied by his military escort and a picked body of Brahui, Baluch and Pathan horsemen, visited the Zhob valley and proceeded down the valley to within 25 miles of Khajuri Kach. The tribes received him in a very friendly manner, and at the close of his tour, the principal *sardars* submitted to him a petition praying to be brought under British protection. During the summer of 1889, Sir Robert Sandeman was accordingly invited to submit proposals for extending a British protectorate over Zhob and the country between the Gomal and Pishin. The Lieutenant-Governor was at the same time invited to co-operate from the Punjab side in the important work of opening up the Gomal pass. The proposals asked for were submitted by Sir Robert Sandeman, and advantage was taken of the Viceroy's tour in the autumn of 1889 on the north-west frontier, to discuss the whole question with the principal officers concerned, *viz.*, the Commander-in-Chief, the Lieutenant-Governor of the Punjab and the Governor-General's Agent, Baluchistan. It was decided that Sir Robert Sandeman should proceed, as soon as possible, on a tour through the Zhob valley, and explore the country of the Mando Khel tribe down to the junction of the Zhob and Gomal rivers. It was also determined to use the opportunity to try and come to some arrangement with the Waziri tribe for the opening of the Gomal pass and also to effect some satisfactory tribal settlement with the Sheranis, who live on the Punjab frontier to the south of the Gomal.

The troops shown in the margin under the command of Colonel R. M. Jennings, 6th Bengal Cavalry, were detailed to accompany the Governor-General's Agent as an escort. Mr. R. I. Bruce, C.I.E., Deputy Commissioner of Dera Ismail Khan, accompanied Sir Robert Sandeman, as the representative of the Punjab Government, to carry out the necessary negotiations with the Sherani and Waziri tribes.

In order to anticipate any exaggerated rumours with regard to these proceedings which might reach the Amir, a letter was sent to His Highness, explaining the nature of the work upon which Sir Robert Sandeman was engaged and the limits imposed upon him. At the same time special instructions were given to the Governor-General's Agent to be careful not to interfere with any of the Ghilzai tribes under the Amir.

On the 18th December the troops forming the escort were inspected at Loralai by Major-General Sir George White, commanding the Quetta district, and the following day the expedition started from Loralai. In addition to the military escort a considerable number of levies, chiefly from the Thal-Chotiāli district, accompanied Sir Robert Sandeman.

Proceeding through Bori in 4 marches, * the expedition reached Murgha

* Dirgi	...	8 miles.
Loi Marra	...	16 "
Humai	...	15 "
Murgha	...	15 "

on the 22nd, and on the following day entered the Gosha plain, marching some 20 miles to the Kibzai village of Lakaband. Gosha was found to be a high plateau of about the same elevation as Quetta. It possesses a fair supply of water and cultivation, and there are stone built villages inhabited by Kibzais and Khwastais dotted about the plain and at the foot of the hills which surround it. On the 24th the expedition halted at Lakaband, continuing the march the following day across Gosha to Garda (17 miles), the chief village of the Babar tribe. The Babar headmen here came in to pay their respects, and the force on the 26th marched down the Siliaza *nala* into Apozai, about 18 miles. Here Sir Robert Sandeman was met by a deputation of the Mando Khel chiefs and also by Umar Khan, the chief of the Abdullazai. At Apozai a *darbar* was held which was attended by all the principal Zhob *maliks*, and the objects and intentions of the British Government were explained to them.

Some time was spent here in securing the attendance of the various *jirgas* and making the necessary arrangements with them. After the negotiations had been brought to a successful issue by Mr. Bruce, the *jirgas* of the Mahsuds, Zalli Khel, Dotanis and the Bargha * division of the Sheranis entered into agreements with the British Government, and service grants and emoluments were allotted to them, on condition that they should be responsible for the safety of the Gomal pass, and should keep it and the Zhob route open to traffic. The Largha division of the Sheranis, or an influential portion of them, including the Khiddarzai section, alone refused to come in and were apparently unfriendly, and a party of cavalry under Colonel Jennings, while patrolling in Kapip, were fired on by a band of Khiddarzais under a notorious thief, named Ranagul. It was therefore decided to leave the Largawals out of the pacific arrangements, and to conclude a separate settlement with the Bargha division, who were to be made over to the charge of the Political Agent, Zhob, until the whole tribe should be dealt with.

During the halt at Apozai a reconnaissance was sent out as far as the Kundar river, which was reached at the point where the Gustoi stream falls into it. No opposition was met with, and Shahib-ud-din Khan, the chief of the Khoidad Khel section of the Suliman Khel and the most powerful chief in that part of the country, came in to make his *salam* and accompanied the party back to Apozai, from whence he was allowed to return to his home, in accordance with the Government orders that the Ghilzai tribes under the Amir were not to be interfered with.

The negotiations with the tribes being completed and the agreements ratified, Sir Robert Sandeman, leaving behind at Apozai Captain I. MacIvor, Political Agent, with an escort as per margin, started for the Gomal with the remainder of the troops. The road had been made roughly by the 23rd Pioneers and Waziri labourers and this much facilitated the march of the troops. Khajuri Kach, at the junction of the

6th Bengal Cavalry	...	160 sabres.
No. 3 (Peshawar) Mountain Battery	...	2 guns.
23rd Bengal Infantry (Pioneers)	...	200 rifles.

† 23rd—Brunj	...	18 miles.
24th—Khatul Kot	...	15 "
25th—Khajuri Kach	...	49 "

Zhob and Gomal, was reached on the 25th January 1890,† a double march being made on that date, and here a halt for two days was ordered to allow of the road over the Gwaleri Kotal being improved. On the 28th January the camp moved to Nilai Kach, all the baggage consisting of 400 mules and 643 camels being safely passed over the *kotal*. A *havildar* of the 23rd Pioneers was unfortunately murdered at Khajuri Kach, on the morning of the 28th. This was said to have been the work of the Suliman Khel, who were hanging about the outskirts of the camp, the *havildar* having wandered in the dark beyond camp bounds. With this exception the march from Loralai to Tank was accomplished without any misadventure. The night at Nilai Kach passed without incident, and Sir Robert Sandeman marched the following day (29th January) into Tank. Here a farewell *darbar* was held, and in consideration of the loyal conduct of the Mahsud Waziri *maliks* Sir Robert Sandeman was authorised to announce to them the immediate suspension of the tax, which was then being levied as a fine for former bad conduct, on their imports into British territory.

After the successful issue of the expedition the head-quarters of the Political Agent, Zhob, were permanently established at Apozai, and arrangements were made for the location there of a small force of all arms. Orders were also given for posts, garrisoned by local levies, to be established to protect the road, and for a military post to be built at Mir Ali Khel to be occupied by troops from Dera Ismail Khan.

In February 1890 a report was received that a *lashkar* was being collected in the hills to attack Apozai and this was said to be under the command of the outlaw Dost Muhammad and consisted of *badmashes* and

* The Sheranis are divided into the Bargha and Largha divisions according as they live on the western or eastern slopes of the main Suliman range.

refugees from all parts and a certain number of Kakars. The strength of the *lashkar* does not appear to have been more than 250 men, and when they had advanced as far as the Chukhan, their courage seems to have failed them, and the whole gathering broke up. Bangal Khan, the son of Dost Muhammad, is said to have wanted himself to come on to Apozai with a few men and to die fighting, but was persuaded to give up this intention.

About the middle of March a report reached Apozai that a tribal gathering of Suliman Khel, Sultan Khel, and Waziris, numbering 8,000 men, and instigated from Kabul intended to attack that place. The intelligence was believed on the spot to be trustworthy, and military precautions were at once taken, but the report turned out to be entirely without foundation.

During the latter part of March 1890, a body of malcontent members of the Darwesh Khel Waziris, attacked the Khajuri Kach post, which was held by friendly Mahsuds. The attack was beaten off, the raiders losing some fourteen of their number killed. The affair was not regarded as of a serious character and was subsequently satisfactorily settled.

This brings the history up to the date of the recent expedition. On the 22nd April 1891, Sir Robert Sandeman submitted certain proposals to the Government of India for the punishment of the Khiddarzai section of the Sherani tribe. This section, as already shown, had refused to come in when summoned by Mr. Bruce during the previous January, and had accordingly been left out of the pacific arrangements then entered into with the other tribes. Although numerically a small section, numbering not more than 250 or 300 fighting men,* they had for many years adopted a defiant attitude towards the British Government. During the survey expedition to the Takht-i-Suliman in 1883, they opposed the escort numbering some 1,500 men at the *kotal* above the Pazai springs, but were routed with a loss of 15 killed and wounded. No settlement was, however, effected with them at that time, and they continued to behave in a contumacious manner. Besides the firing on Colonel Jennings's party in the Kapip valley mentioned above, they were concerned in a raid at the end of March 1890, which led to the death of Saku, one of the principal Bargha Sherani *maliks* and a faithful servant of the British Government.

On the 9th July 1890, Sir Robert Sandeman submitted a second letter to Government in which he recommended that advantage should be taken of the collection of a force for the proposed settlement with the Khiddarzais, to visit *en route* the northern Kakar country on the upper Kunder, and put an end to the feeling of uncertainty caused by the presence in that neighbourhood of the outlaw, Dost Muhammad, and his son, and their following of outlaws. Should a force not be sent to settle with the Khiddarzais, Sir Robert Sandeman was of opinion that it was absolutely necessary to secure the peace of Zhob and the frontier generally, that troops should be told off to expel Dost Muhammad and his following from the country under British protection. With this letter the Governor-General's Agent forwarded a memorandum, in which he proposed that the force should assemble at Hindu Bagh in the Zhob valley at the beginning of October, and from there should march in the direction of Dost Muhammad's head-quarters. After having captured that outlaw or expelled him from the Kakar country, the expedition should march along the Kunder river to Domandi at the junction of the Kunder and Gomal streams, examining the country of the Zhob Kakars and the Mando Khel. From Domandi, the expedition to proceed to Apozai and thence to the Khiddarzai Sherani country.

The Government of India, in the Foreign Department, in a letter dated the 8th August 1890, sanctioned the expedition against the Khiddarzai Sheranis, to be carried out by troops

Punitive expedition against the Khiddarzai Sheranis sanctioned, the force to proceed from Quetta, and visit *en route* the northern Kakar country.

*The latest information gives their numbers as 163 only.—A. H. M.

from Quetta in the manner above proposed by Sir Robert Sandeman. That officer was directed to arrange all details with Major-General Sir George White, commanding the Quetta district, to whom the conduct of the operations was entrusted, Sir Robert Sandeman accompanying the column as Chief Political Officer.

Great care was to be taken that the force did not proceed beyond Kakar limits, and no negotiations were to be entered into with Ghilzai tribes, as the Government of India had no wish or intention of encroaching on Afghanistan or of interfering with the Amir's subjects.

With regard to the Sheranis, the question of political control, whether this should be from Apozai or from Dera Ismail Khan, was reserved until the results of the expedition were known and the country had been thoroughly explored.

Arrangements were also made for Mr. Bruce, the Officiating Commissioner of the Derajat, to join Sir Robert Sandeman in the Khiddarzai country, so that all cases outstanding against that section of the tribe, whether connected with the Punjab or Zhob, might be satisfactorily settled, and the Government hoped that in the course of the expedition an agreement between the Baluchistan and Punjab officers might be effected relative to the boundary on this part of the border between the two jurisdictions.

In order to prevent any misleading rumours reaching the Amir, the objects of the expedition and the orders issued to our officers were explained to His Highness by the Viceroy, in a letter dated the 21st September.

At the end of August, orders were issued for the formation of the expeditionary force which was to be styled the "Zhob Field Force."

Formation of Zhob Field Force.

This force consisted of the following troops:—

No. 7 Mountain Battery, Royal Artillery,

2nd Battalion, King's Own Yorkshire Light Infantry,

18th Bengal Lancers (head-quarters and two squadrons),

No. 1 Company, Bombay Sappers and Miners,

29th Bombay Infantry (2nd Baluch Battalion),

30th Bombay Infantry (3rd Baluch Battalion).

Two sections 23rd British Field Hospital with two sections 24th and three sections 25th Native Field Hospitals accompanied the force.

The British infantry battalion was ordered to move into the field 500 strong and the native infantry battalions each 550 strong.

Concentration was to take place at Hindu Bagh by the 1st October.

A detail of the staff is given in Appendix A.

The following orders with regard to clothing, equipment, ammunition, &c., were approved by Government.

Clothing.—The winter scale of clothing for British and native troops and followers, as laid down in the Field Service Manual, Commissariat, will be issued, and all followers will be provided with a waterproof sheet.

Equipment.—Baggage on the field service scale will be taken, an additional 5 lbs. being allowed for warm clothing, owing to the extreme cold anticipated.

Ammunition.—Ammunition on the following scale will be taken :—

Per infantry soldier	...	{	40 rounds carried on person,
			50 rounds carried on mules (1st reserve),
			60 rounds carried on camels (2nd reserve).
Per cavalry soldier	...	{	20 rounds carried on person,
			20 rounds carried in wallets,
			60 rounds carried on camels (reserve).

One hundred thousand rounds of Martini-Henry rifle, and 10,000 rounds of carbine ammunition will be held in reserve at Apozai.

Supplies.—Supplies for the whole force for $2\frac{1}{2}$ months will be collected. Depôts will be formed at Kazhe and at Apozai in the Zhob valley; 25 days' supplies will accompany the force when it advances from Hindu Bagh.

Free rations will be issued to the troops taking part in the expedition from the dates they leave their respective stations, with the exception of the 30th Bombay Infantry, which will draw free rations from the date of arrival at Khanai.

Transport.—Corps will move into the field on the usual field service scale, with tents, regulation number of followers, &c.

Medical.—In consequence of the sick having to accompany the force, the General Officer Commanding is empowered to sanction such additional ambulance as may be necessary. Corps units to be equipped as laid down in the Field Service Manual, Medical. Six bearers per *dandi* to be provided.

First phase of the operations.

The operations of the Zhob Field Force naturally divide themselves into two phases :—

1st.—The march from the Zhob valley into the valleys of the Kunder and Gomai rivers and thence to Apozai.

2nd.—The operations against the Khiddarzai and other sections of the Sherani tribe.

The troops under orders to take part in the expedition were all stationed at Quetta, with the exception of the 18th Bengal Lancers and the 2nd Baluchis at Loralai, and the 3rd Baluchis at Haidarabad in Sind. The last named regiment was ordered to be railed up so as to arrive at Khanai on the 28th September, and the regiments at Loralai were directed to march from that station and join the force in the Zhob valley.

The troops from Quetta were under orders to move on the 25th September, but owing to a sufficient number of camels not being forthcoming at the last moment, it was not until the 27th that they marched from Quetta, the British portion of the force moving on that day, and No. 1 Company, Bombay Sappers and Miners, with the Native Field Hospital, on the following day. The first march was to Kuchlak ($11\frac{1}{2}$ miles) and the second march to Khanai (16 miles). From Khanai to Kanozai is 15 miles, and on the 30th September the troops, as

No. 7 Mountain Battery, Royal Artillery.
King's Own Yorkshire Light Infantry.
No. 1 Company, Bombay Sappers and Miners.
3rd Baluch Battalion.

per margin, with the field hospitals, were concentrated at that place. On this date Major-General Sir George White arrived and assumed command of the force.

Sir Robert Sandeman also joined the expedition at Kanozai on the 30th. On the 1st October the force marched to Murgha (15 miles) and the following day to Hindu Bagh in the Zhob valley (13 miles). Kan Mehtarzai (13 miles) would have been a more suitable halting place between Kanozai and Hindu Bagh, the camping-ground there being better than that at Murgha, while the water-supply would have been equally good.

The original plan proposed for the operations had been to try and cut off the retreat into Afghan territory of Dost Muhammad and his following who were known to be on or near the Kundar, and with this in view Sir Robert Sandeman was to move by the most westerly route from upper Zhob to Tirwah, that, namely, which, leaving the Rod valley near its head and skirting the Afghan frontier, runs north by Mian Khel Karez and Palezgir to Tirwah. Meanwhile the main force under Sir George White was to advance on Thanishpa from the south, and the outlaws, finding themselves thus surrounded, would, it was believed, probably recognize the uselessness of resistance and submit. The Government of India, however, considered that any movement in the direction of Tirwah would be likely to raise suspicions in the mind of the Amir, and accordingly directed that the operations should be limited to the country south of the Kundar river. These orders necessitated an alteration in the plan of campaign, rendering impossible the proposed turning movement, and making it necessary to trust to the chances of a direct advance from Zhob.

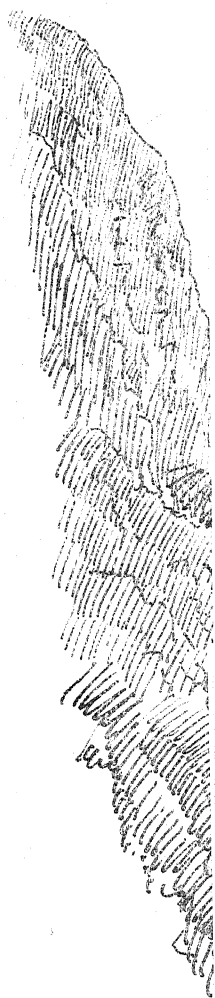
With a view to learning as much geography as possible and extending our political influence as widely as our opportunities would admit, it was decided that the march from the Zhob valley across the hills which form its northern boundary should be carried out in three columns, the objective of all of them being Thanishpa. No. 1 (head-quarters') column under the personal command of Sir George White was to march by the Toi river route. No. 2 column under the command of Colonel M. H. Nicolson, 3rd Baluch Battalion, and accompanied by Sir Robert Sandeman, was to move *via* Maidan Kach and Baraksia across the Khaisor valley on Thanishpa. No. 3 was a small column under the command of Captain A. H. Mason, Deputy Assistant Quarter-Master General for Intelligence, with whom went Captain R. J. H., L. Mackenzie, R. E., of the Survey Department. This column was to cross the Dhana pass into the Rod valley and thence to gain the head of the Khaisor valley and march down it rejoining the head-quarters of the force at Thanishpa.

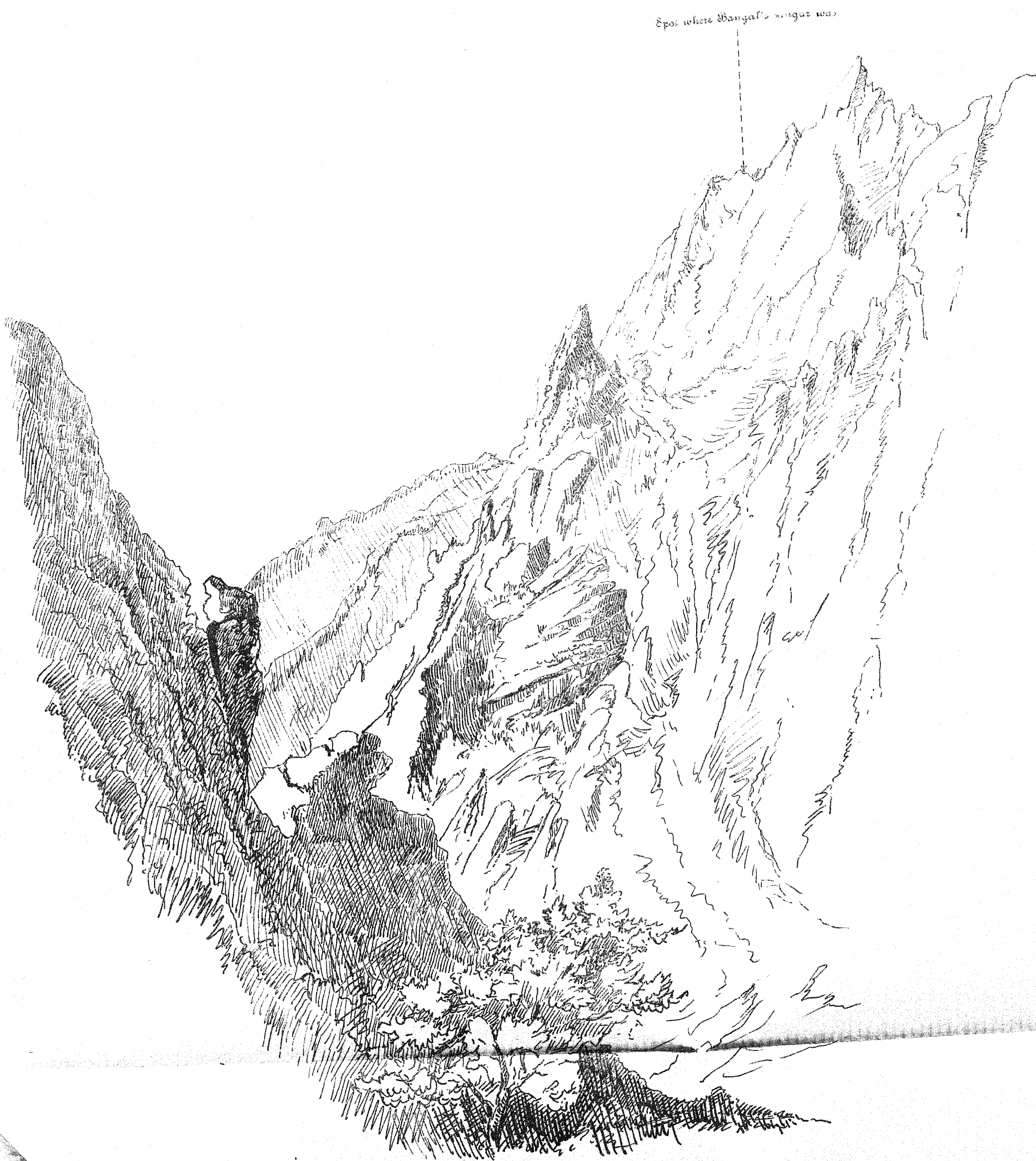
On the 3rd October the force left Hindu Bagh and marched to Shina Khula (10 miles) where the camp was pitched on an open stony plain, with a plentiful supply of water from a spring in the hills. There is a large tank here which can be filled in 12 hours. On the 4th No. 1 column with the head-quarters marched to Kazhe a long tiring march of $20\frac{1}{4}$ miles, with no water on the road. At Kazhe the camp was pitched on the left bank of the Zhob stream from which the water-supply was obtained, abundant but brackish. The 2nd column halted at Shina Khula on the 4th, while the sappers went ahead to improve the road. The 3rd column started on the 4th from Shina Khula for Babu China.

It is necessary to describe separately the movements of these columns, and it will be convenient to begin with the 2nd column. On the 5th this column, troops as per margin, under the command of Colonel Nicolson and accompanied by Sir Robert Sandeman marched from Shina Khula to Maidan Kach (13 miles), and the following day to Baraksia ($13\frac{1}{2}$ miles). This latter was a bad march, the path being narrow and the column having to march nearly all the way in single file. On the 7th October the column reached Haodak in the Khaisor valley ($9\frac{1}{2}$ miles), the road being bad and similar to the previous march. At one point the track was almost impassable for camels. On the 8th the column marched down the Khaisor valley to China (16 miles), where it was joined on the following day by Sir George White and staff.

No. 7 Mountain Battery, Royal Artillery (2 guns).
King's Own Yorkshire Light Infantry, 1 company.
18th Bengal Lancers, 1 troop (from Kazhe).
Half No. 1 Company, Bombay Sappers and Miners.
3rd Baluch Battalion, 2 companies.

No. 1 column, having halted at Kazhe on the 5th October, advanced along the foot of the hills to the north of the Zhob valley on the morning of the 6th to Khushnob (16 miles) passing half way the deserted village of Mullazai





BANGAL'S PEAK, THANISHPA,
from a place half-way up the hill, showing the track up and position of Bangal's
fastness on the top (8,800 ft.). The ascent is very steep.

(Ed.) A. W. Crawford McFall, Lieut.,
2nd Battalion, K. O. Yorkshire, I. D.

Karez. At Khushnob the water, although ample in quantity, was brackish. On the 7th the column continued its march along the foot of the hills for about 11 miles, when it turned to the left and entered the hills through an easy *tangi* leading into a wide valley parallel to the Zhob. Crossing this valley, the column diverged from it for about a mile through another *tangi* to the camping ground at Jaba where there is an excellent spring and an ample supply of water. Distance from Khushnob $16\frac{1}{2}$ miles. On the 8th the column marched to Toi War ($10\frac{1}{2}$ miles), where the Toi river debouches into the Zhob valley. Here the column was joined by the 18th Bengal Lancers and the 2nd Baluch Battalion from Loralai. The water at this place is limited and its quality indifferent. On the 9th half the column marched to Sharan Kach ($13\frac{1}{2}$ miles), and the following day to Kuria Wasta (11 miles) in the Khaisor valley, being followed a day later by the other half of the column. The General Officer Commanding and staff, however, marched direct to China on the 9th and there joined the 2nd column as already mentioned.

It had meanwhile been ascertained that while Dost Muhammad was on the Kundar north-west of Thanishpa, his son Bangal Khan with a party of forty or fifty fanatical followers was still at the latter place, and declared his intention of resisting our advance and had taken up a position on a peak immediately overlooking the Thanishpa hamlets. Accordingly on the 10th October Sir George White advanced with the 2nd column across the open Khaisor valley, and through the long and narrow defile which leads to Thanishpa. On arriving there about 1 P.M., it was found that Bangal Khan had deserted his so-called fort, and his people had fled that morning. A party of 50 rifles, 3rd Baluch Battalion, was sent up to visit the place, which was found to be situated on a precipitous peak (8,800'), very difficult of access from the Thanishpa side, but having a safe line of retreat down towards the Kundar valley on the north.

Thanishpa is a picturesque village, belonging to the Shahizai Kakars surrounded by hills on all sides. It possesses an abundant and good supply of water. Its height is 7,850'. There is a certain amount of cultivation, but its area is not very great, the narrow valley being shut in on either side between high sand-stone ridges.

Early on the morning of the 11th a detachment of the 18th Bengal Lancers under Lieutenant K. Chesney accompanied by Captain I. MacIvor and Lieutenant C. Archer with a strong force of levies started from Thanishpa in pursuit of Bangal Khan and his followers. The fugitives were pursued for a considerable distance in a north-westerly direction, and a quantity of property * which they were carrying off was captured. Bangal Khan and his father Dost Muhammad, whom he had picked up on the way, made good their escape with a few followers into the hills beyond the Kundar, and the remainder of their band broke up and dispersed into hiding places among the hills. It was subsequently ascertained that the chief fugitives made their way to Kila Jabbar in the Ghilzai country. The pursuit party returned to camp at Thanishpa in the evening, having been out nearly 15 hours and traversed a distance of between 50 and 60 miles. One horse died of fatigue during the day.

On the same date the General Officer Commanding visited the so-called fort of Bangal Khan, and the rocks constituting the fastness were blown up in accordance with the wish of the Chief Political Officer, who considered the political effect of the destruction of Bangal Khan's stronghold would be good.

On the 11th No. 3 column under Captain A. H. Mason rejoined the field force head-quarters at Thanishpa. This small column as already stated marched from Shina Khula on the 4th October. At 10 miles the Dhana pass

* Amongst this was a *Koran* of great value, said to have been stolen from the son of Mulla Mushk-i-Alam.

(8,700') very difficult for camels was crossed, and two miles further on the small Mardanzai village of Andreviezh was reached where a halt was made for the night. The following day the march was continued to Babu China (9 miles) passing half way the Mardanzai village of Kozhkats which is the limit of Mardanzai territory, the country of the Mirzai being here entered. Babu China consists of several villages and is situated in the Rod valley. It belongs to the Fakirzai sub-section of the Mirzai. There is sufficient ground for a large force to encamp here, and good water is abundant. Its height is 7,250,' and it would be a suitable site for a post at any future time should it be considered desirable to have one in the Rod valley. On the 16th a halt was made and the difficult ascent to the top of the Sakir peak (10,125') was made. From this point Lieutenant Mackenzie succeeded in seeing a large amount of the country to the north, which had not previously been surveyed. From Babu China the column marched on the 7th over the Lunda pass (8,300') to Gargasuliman at the head of the Khaisor valley, a distance of 14 miles. The Kunder river was found to be not more than a mile to the north of this point, its position as shown on the then existing maps being altogether wrong. On the 8th the march was continued in an easterly direction down the valley to Marjan (10½ miles), where the direct road comes in from Babu China over the Kash pass. On the following day Haodak (10 miles) was reached. Half way Mirzai lands were left and Jalalzai territory was entered. At Haodak, which is situated on the north side of the Khaisor valley, the road followed by No. 2 column was met, and the marches beyond that, *viz.*, China (16 miles) and Thanishpa (18 miles), were the same as those followed by Colonel Nicolson's column.

The force halted at Thanishpa and Kuria Wasta from the 11th to 16th October, and advantage was taken of the halt to come to an understanding with the Shahizai and other Jalalzai sections inhabiting Thanishpa and its neighbourhood and with the Mardanzai Kakars of Khaisor. They undertook not to allow the outlaws to return within their limits, and furnished hostages from among their headmen for the fulfilment of their promises. This short halt also allowed time for supplies to be brought up for the further forward movements. On the 12th the General Officer Commanding and staff left Thanishpa and returned to Kuria Wasta to rejoin No. 1 column.

As it was reported that the onward march from Thanishpa presented great difficulties in the matter of supplies and that forage for horses and mules would have to be carried on camels, General White issued orders that all details not actually required were to be sent back to Apozai. A redistribution of the force

Head-quarters' column.	
No. 7 Mountain Battery, R. A. (2 guns).	
King's Own Yorkshire Light Infantry ...	400 rifles.
18th Bengal Lancers (1 troop).	
No. 1 Company, Bombay Sappers and Miners ...	25 rifles.
2nd Baluch Battalion ...	400 rifles.
Colonel Nicolson's column.	
18th Bengal Lancers (1 troop).	
No. 1 Company, Bombay Sappers and Miners ...	50 rifles.
3rd Baluch Battalion ...	400 rifles.

into two columns, as per margin, was accordingly made, and the remainder of the troops under Lieutenant-Colonel Morgan, R. A., with all spare stores were ordered to march down the Toi and thence *via* the Zhob valley to Apozai, there to await further orders. Both the columns were ordered to move as light as possible. Ammunition—infantry 40 rounds in pouch, 50 on mules; camp equipage—British troops, 12 men to a general service tent, inner fly only; native troops no tents; kits—British troops 30lbs. per man; native troops and followers, 20 lbs. per man; supplies—head-quarters' column to carry eight days' supplies and seven days' forage; Colonel Nicolson's column nine days' supplies and seven days' forage.

On the 15th October the General Officer Commanding and staff with the King's Own Yorkshire Light Infantry and the 2nd Baluch Battalion marched from Kuria Wasta to Thanishpa.

On this date Sub-Surveyor Asgar Ali with an escort of 1 native officer and 25 men, 2nd Baluch Battalion, started from Kuria Wasta for Apozai *via* the Shaighala route for survey purposes.

On the 16th October Colonel Nicolson's column, accompanied by Sir Robert Sandeman, marched from Thanishpa to Nigange on the Kunder (17 miles) *via* the Shin Narai Kotal (7,450'), the head-quarters' column halting at Thanishpa on that date. The plan for the advance was as follows:—Colonel Nicolson's column to move from Nigange *via* the Chukhan and Sharan routes to Gustoi War, crossing the Sharan or Narai Kotal, while the head-quarters' column marched to Nigange and thence down the Kunder valley effecting a junction with the other column at Gustoi War.

Accordingly Colonel Nicolson on the 17th marched from Nigange by a fairly easy and well beaten caravan track to Dholesar (10½ miles) and the following day to Sanzi War (21 miles) in the Chukhan valley, crossing about half way the Shagana Kotal (6,796'). At Sanzi War the water was scanty and slightly brackish. From that camp the march was continued down the Chukhan valley to Ambara (19 miles), the point where the Chukhan breaks through the dividing range on its way to join the Zhob. Here there is good water, but the camping ground is confined. From Ambara Lieutenant Southey, Field Intelligence Officer, with a small escort was detached to explore Uzhda Wazha with orders to rejoin the column at Gustoi War. On the 20th October the column marched to Sharan 6 miles. At Ambara the Chukhan caravan road was left, and a rough track was followed up the bed of the Sharan *nala* to the new camping-ground, where there was a good supply of water. From this camp the Sappers and Miners and a company of the 3rd Baluch Battalion were sent on 6 miles to the Sharan Kotal to work on the road, and in the afternoon it was reported that this would be ready by 9 A. M. the next morning. Accordingly on the 21st the column marched from Sharan camp and having crossed the *kotal* descended the Gustoi valley to the camp at Gustoi War on the right bank of the Kunder, a distance of 17 miles. The road was bad in places, and the camels which had started at 8 A. M. did not get into camp until midnight.

To return to the movements of the head-quarters' column. On the 17th October Sir George White accompanied by Captain MacIvor as Political Officer, marched with this column from Thanishpa to Nigange, the point where the permanent flow of water first appears in the Kunder. The descent from the Shin Narai Kotal had been improved by working parties since Colonel Nicolson's column had traversed the route on the previous day. On the 18th General White marched down the left bank of the Kunder to Kala Mulla Kamal (12½ miles). The small village of that name is, however, situated about 2 miles southwest of the spot where the camp was pitched on the left bank of the Kunder. Water abundant from the stream but brackish. On the 19th the march was continued down the bed of the Kunder to Nakhal or Spole Loara (15½ miles). This was an easy march for the transport, though there was deep sand in places. The camp was pitched on the left bank of the Kandil stream which here joins the Kunder. The water in the Kandil was good and plentiful but very muddy. On the 20th the column marched from Nakhal to Sara Darga (11 miles). For 3½ miles the track, leaving the Kunder valley, ran over the Spole Loara plain and then entered a narrow *tangi* which it traversed for 2 miles, when it rejoined the Kunder valley. From here the road descended the Kunder past Nama Khanai (the navel stone) to the camping-ground at Sara Darga on the right bank of the Kunder. On the 21st the march was continued down the valley to Sarmago Kach (12½ miles) two miles short of Gustoi War, where Colonel Nicolson's column arrived on this date as already mentioned. During the march two shots were fired at the rear-guard at long ranges, but did no damage.

On the 22nd the two columns halted at Sarmago Kach and Gustoi War respectively. The General Officer Commanding and staff rode over to Gustoi War in the morning and from there proceeded with an escort of levies up the Gustoi stream to the village of Sanzali. From here the ascent was made to the crest of the Speraghar range at a point called Kamwala (7,200'). A fine view was obtained over the Gardao plain and right away to the Takht-i-Suliman range in the distance. There is very little water to be found on the Speraghar

range and no sites at all suitable for a sanatorium such as had been previously supposed from descriptions received from native sources. There is a good camping ground for a small force at Gustoi War. The water in the Gustoi stream is clear and sweet, while the Kundar water is here still brackish. In the evening Sir George White returned to camp at Sarmago Kach.

On the 23rd both columns marched down the Kundar to Husain Nika Ziarat, where the camp was pitched on the right bank of the river. During the day a grass-cutter of the 18th Bengal Lancers was cut up near camp and within 300 yards of the guard. The perpetrators of the outrage managed to escape, although a party of cavalry were at once sent out to try and intercept them. At Husain Nika Ziarat a convoy of supplies sent from Apozai across the Gardao plain replenished the commissariat stores of both columns.

From Husain Ziarat the force marched in two columns by separate routes to Apozai. Sir George White, taking with him a lightly equipped column, strength as per margin, as an escort, marched *via* Domandi and the Gomal, while Colonel Nicolson with the remainder of the force, and accompanied by Sir Robert Sandeman, followed the direct route to Apozai. Each column carried four days' rations.

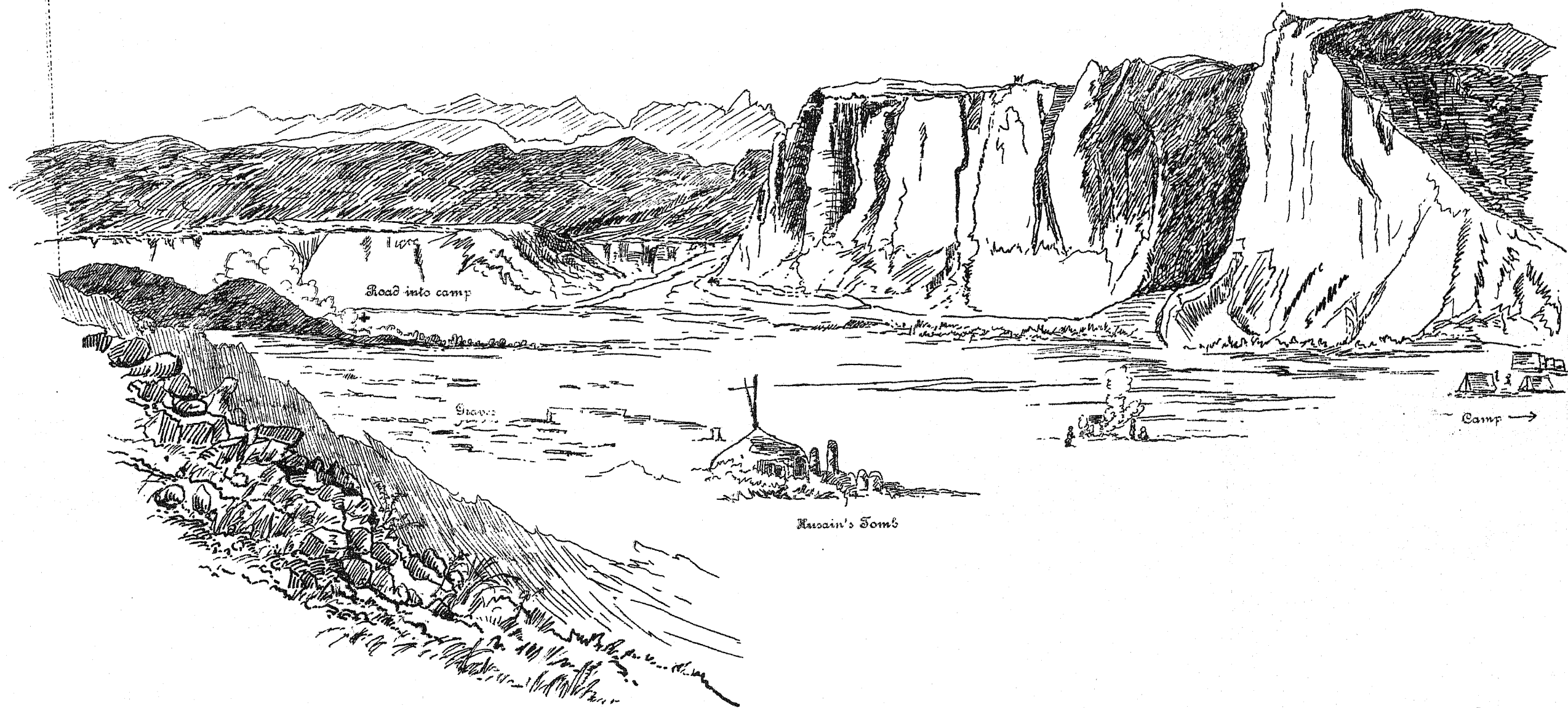
Colonel Nicolson's column marched from Husain Nika Ziarat on the morning of the 24th to Inzara ($3\frac{1}{4}$ miles); water had to be brought from a spring more than a mile from camp, and a few shots were fired at the first men who went down to fetch it, but without effect. On the following day Colonel Nicolson marched to Gardani ($20\frac{1}{2}$ miles), the road crossing the Shinbaza Kotal (5,320') and then going over the Gardao plain. The camp at Gardani was at the junction of the stream of that name and the Siritoi. Water good and plentiful from the bed of the stream. On the 26th the column marched to Sapai ($9\frac{1}{2}$ miles). The route followed the Siritoi for two miles to the point where it joins the Zhob, and then continued up that stream to Sapai, where the camp was pitched on its right bank. Water obtained from the stream, good and abundant. On the 27th Brunj (15 miles) was reached, and on the following day the column marched to Apozai (13 miles), passing the Viala villages about half way. The force encamped near the new cantonment, known as Fort Sandeman, which is $1\frac{1}{2}$ miles to the north-east of the village of Apozai.

In the meanwhile Sir George White marched from Husain Nika Ziarat on the 24th and moved down the Kundar to its junction with the Gomal at Domandi ($8\frac{1}{2}$ miles). The road leading out of camp was very steep and bad for about a mile, but after this it was easy going, first over an open plain and then down the bed of the Inzara *nala* between very steep banks to its junction with the Kundar and thence down the Kundar valley itself to Domandi. An escort of Zhob levies with camels was fired on in the evening when coming down the Inzara *nala*, but drove off their assailants, and brought the convoy safely into camp.

On the 25th the march was continued down the Gomal to Kurma (10 miles) passing *en route* Gul Kach. The camp was pitched on the right bank of the Gomal where the Kurma *nala* from the south joins it. Major Scott, R. E., in charge of the Zhob railway survey, who had joined the camp on the previous day accompanied Sir George White and remained with him until he reached Apozai. On the 26th the General Officer Commanding marched to Gardani (18 miles). At 10 miles the watershed between the Gomal and Siritoi was reached, and the track then ran across the open Gardao plain for 5 miles when it entered the Gardani *nala* and descended its bed to the camp at its junction with the Siritoi where Colonel Nicolson's column had halted on the previous day. On the 27th Sir George White marched to Sapai, visiting *en route* the Mir Ali Khel post which is two miles down the Zhob from the point where the Siritoi joins it. On the 28th the General marched to Brunj and the following day into Apozai, where

Another track into camp
Down here

Watch here of Baluchi:



(52.) A. W. Crawford McFall, Lieut.,
2nd Battalion, R. O. Yorkshire, L. I.

HUSAIN NIKA ZIARAT

View from the caves in the hill side on the south of Camp, looking down.

the whole of the Zhob Field Force was now concentrated. The column under Lieutenant-Colonel Morgan had arrived several days earlier from Kuria Wasta *via* the Zhob valley, and the escort of the 2nd Baluch Battalion with Sub-Surveyor Asgar Ali had also arrived safely by the Shaighali route, the survey work having been satisfactorily carried out.

Throughout the march above described from Thanishpa onwards, the disposition of the people on both lines was found on the whole friendly. The Chukhan route led through country occupied by Mardanzais, Babars and Mando Khel, who as a matter of course rendered all the assistance in their power. Along the Kundar route, Lowanas, Zhamrianis and Safis (a widely spread nomad tribe) were chiefly met with, and they too proved of much use in the collection of supplies, &c. Indeed, a number of Safis attached themselves to both columns and drove a brisk trade in sheep and goats. On arrival at Gustoi War a considerable number of Suliman Khel flock owners were found in the neighbourhood, as also near Domandi and Gul Kach and on the Gardao plain. They furnished useful assistance in the matter of guides, supplies, &c., and their headman, Haidar Khan, especially made himself of use. A slight show of hostility was displayed on two or three occasions as mentioned above, but on the whole it is remarkable that the passage of so large a number of alien troops and followers with a considerable baggage train, over a route hitherto unexplored, and inhabited by wild and fanatical tribes, should have been accomplished with so small a proportion of accident.

On the 30th October a parade of all the troops of the Zhob Field Force and the local garrison was held at Apozai, which was attended by Sir Robert Sandeman, the political staff and many of the *maliks*, and the same day a *darbar* was held at which Sir Robert Sandeman distributed rewards to the chiefs of Zhob headed by Sardar Shingul Khan, who had heartily co-operated in our arrangements, and Sir Robert Sandeman took the opportunity of congratulating the *Sardar* on the general good behaviour of the people of the valley since the establishment of the British protectorate.

On the whole it must be considered that the objects with which the above march was undertaken were successfully attained. It is to be regretted that Dost Muhammad and his son Bangal Khan were able to make good their escape across the frontier, but from the moment it became necessary to relinquish the idea of getting behind their position, it was recognized that their capture was unlikely.

The very fact, however, of their ignominious flight has been a heavy blow to their prestige, and it is hoped that the security taken from the northern Jalalzais and Mardanzais will be sufficient to ensure the active combination of the well-disposed among those tribes to prevent the return of the outlaws to their stronghold. In addition to the above results a very large tract of hitherto unknown country has been explored, including several of the best used caravan routes leading from India to southern Afghanistan, and information has been collected which will enable the limits of the Kakar country to be laid down with accuracy.

In this connection the note on the Lowanas by Captain MacIvor, given in Appendix B, is important as showing that the Lowanas as a tribe are Kakar subjects and as such owe allegiance to the head of the Kakar tribes.

With the parade of troops and the *darbar* held at Apozai on the 30th October, the first phase of the operations of the Zhob Field Force may be considered closed.

The second phase of the expedition comprises the operations against the Khiddarzai and other sections of the Sherani tribe.

Second phase of the operations.

In his letter to Government, dated the 22nd April 1890, Sir Robert Sandeman had originally proposed that two forces of equal strength, one from

the Punjab and the other from Apozai, should be sent against the Khiddarzais the two to join hands in the Sherani country. The Lieutenant-Governor of the Punjab, however, recorded his opinion that on account of the geographical position of the Khiddarzais and the greater facilities for supplying the troops from the Punjab side, as well as for other reasons, the best plan of campaign would be for the main force to go from the Punjab, and that a smaller column should co-operate from the Apozai side. The Government of India, as has been seen, decided that the force should proceed from Quetta with Sir Robert Sandeman as Chief Political Officer, and they did not consider it necessary that any troops should be sent from the Punjab. They further directed that Mr. Bruce, the Commissioner of the Derajat, should join Sir Robert Sandeman in the Khiddarzai country to facilitate a satisfactory and simultaneous settlement of all cases, both from the Punjab and Baluchistan, pending against the tribe. Subsequently it was strongly urged both by Sir George White and again by the Punjab Government that a force should be sent in from the Punjab side, and it was finally decided that the troops, as per

1st Punjab Cavalry (1 troop).
 3rd Punjab Cavalry (1 squadron).
 No. 1 (Kohat) Mountain Battery (4 guns).
 No. 7 (Bengal) Mountain Battery (2 guns).
 Half Battalion 1st Sikh Infantry.
 Do. 2nd Sikh Infantry.
 Do. 2nd Punjab Infantry.

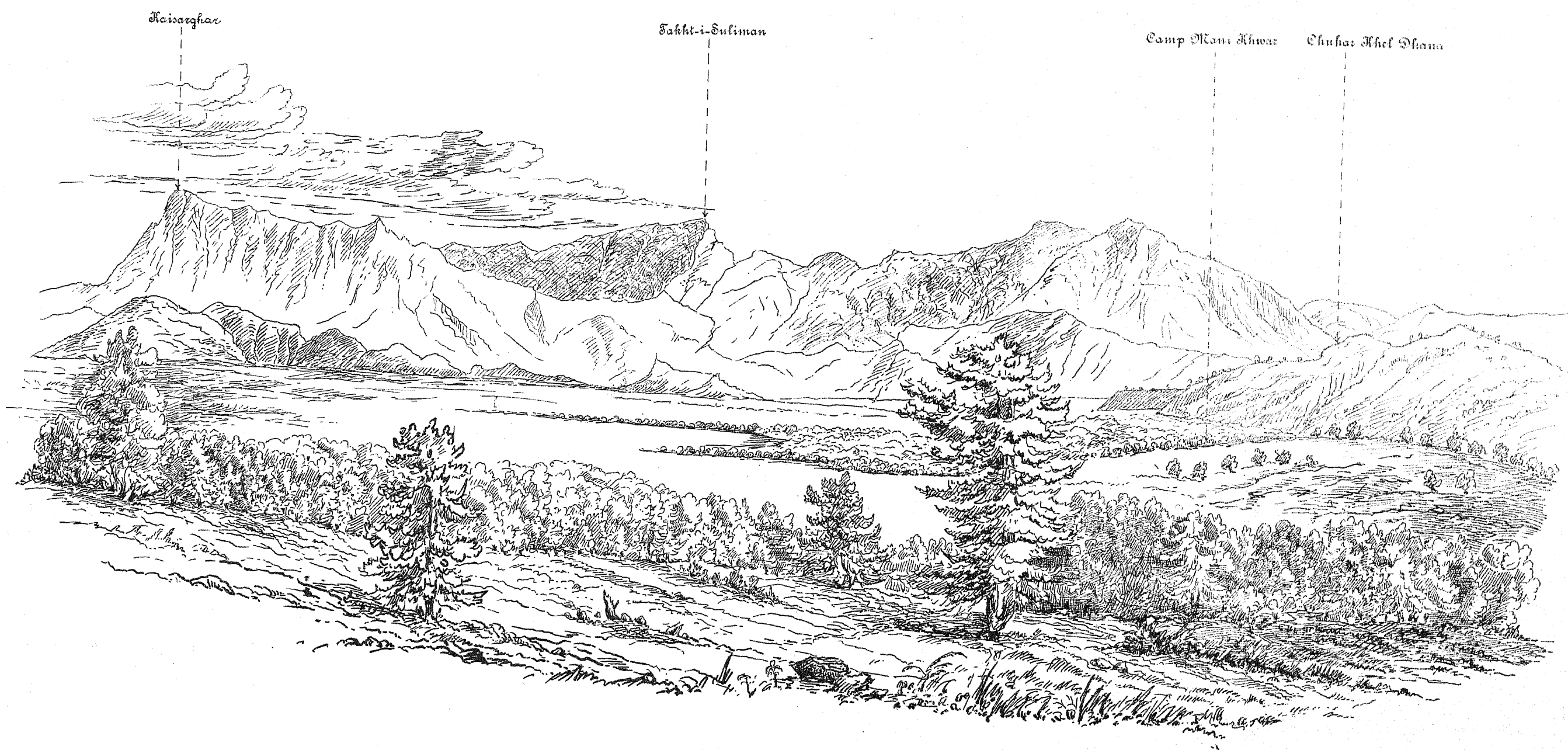
Total 1,651 of all ranks.

margin, belonging to the Punjab Frontier Force, should be placed under the orders of Sir George White to act against the Sheranis from the east based on the Derajat. This force was under the immediate command of Colonel A. G. Ross, C.B., 1st Sikh Infantry.

As has already been mentioned no settlement had been come to with the Largha division of the Sheranis during Sir Robert Sandeman's tour through the Zhob Valley in 1889-90, owing to the contumacious conduct of the Khiddarzai section. After the termination of that expedition the Largha *maliks* with the exception of the Khiddarzai came into Dera Ismail Khan in February 1890, and a settlement was made with them on the condition that they should put pressure on the Khiddarzais and force them to come in and submit unconditionally within six months. If they failed to carry out this condition within that period the engagements would be considered cancelled.

At the time it was anticipated that these measures would succeed in bringing about the unreserved submission of the Khiddarzais, but it soon became doubtful if the other sections of the Largha Sheranis would be able to carry out their part of the agreement. In June a deputation of most of the leading *maliks* of the Khiddarzai section waited upon the Deputy Commissioner of Dera Ismail Khan at Shekh Budin, but they were not accompanied by Murtaza Khan nor were they prepared to agree to the unconditional surrender of the refugees, four in number, who were accused of murder and who had obtained an asylum with them. The deputation was accordingly dismissed, and the situation remained unchanged up to the time the force arrived at Apozai.

On the 26th October Mr. Bruce, the Commissioner of the Derajat, had met Sir Robert Sandeman at Sapai having come through the Gomal pass under a tribal escort, and had accompanied him to Apozai. From here an *ultimatum* (see Appendix C) was sent to Murtaza Khan and the other Khiddarzai headmen calling on them to make immediate submission. It may be mentioned that subsequent to the march of the expedition from Quetta two serious outrages had been committed within a short distance of Apozai. In one of these two *sowars* of the 12th Bengal Cavalry were murdered near Babar, and in the other three traders were robbed and wounded between Babar and Apozai. Both of these outrages were eventually brought home to the Khiddarzais and to the refugees harboured by them. The only reply received to the *ultimatum* was a request from Murtaza Khan for a month's grace to consider its terms. Sir Robert Sandeman immediately informed General White that further delay was useless, and that it would be necessary to compel the Khiddarzais to submit by force of arms.



VIEW OF THE TAKHT-I-SULIMAN RANGE FROM FOOT OF ATSU KOTAL.

J. B., September 1891.
Sed. J. A. A.

(52.) R. Southey, Lieutenant,
3rd Baluch Battalion.
Field Intelligence Officer.

Orders were accordingly issued for an advance into the Sherani country.

Advance into the Sherani country.

The force was divided into two columns, one, under the personal command of Sir George White, was to march by Wala over the Maramazh range direct to the Khiddarzai head-quarters of Namar Kalan, while the other under the command of Colonel Nicolson was to proceed *via* the Chuhar Khel Dhana to Mogal Kot. At the same time Sir George White directed Colonel Ross to occupy Drazand, the largest village of the Largha Sheranis. This was done with the two-fold purpose of containing the other sections of the tribe in a military sense, and also of affording them the plea of *force majeure* against the tribal obligation of making common cause against the advance of the British.

A return of the strength of the Zhob Field Force previous to the advance into the Sherani country is given in Appendix D.

On the 30th October a cavalry party under Captain Unwin, 1st Punjab Cavalry, sent out from Draband to reconnoitre the mouth of the Drazand Zam was fired on by a Sherani picquet, which then withdrew to a *sangar* on the hill above. The enemy consisted of some 20 or 30 men from the Uba Khel village of Maidan. The cavalry were ordered to dismount and dislodge the enemy from their position which they did, killing two and wounding three without any loss to themselves. Captain Unwin proceeded some way up the pass, meeting with no further opposition and then returned to camp at Draband. On the 1st November Colonel Ross accompanied by Mr. L. W. King, Deputy Commissioner of Dera Ismail Khan, as Political Officer, occupied

3rd Punjab Cavalry (1 squadron).
No. 1 (Kohat) Mountain Battery (2 guns).
No. 7 (Bengal) Mountain Battery (2 guns).
Half battalion, 1st Sikh Infantry.
Ditto 2nd ditto

Drazand with the troops, as per margin, without opposition, so that the restraining hand might be applied before the general advance from Apozai. The Uba Khel and

Chuhar Khel *jirgas* had already come in, but the Hassan Khel steadily ignored all summonses to attend, and it was not until the 3rd November that their *jirga*, in consequence of a peremptory order, sent to them by Mr. King to attend at once on pain of being considered enemies, arrived in camp at Drazand. The *ultimatum* sent to the Khiddarzais by Sir Robert Sandeman was read to all the *jirgas*, and a deputation from each of them was directed to proceed to the Khiddarzai country, and use every endeavour to compel the more important *maliks* to come in with the refugees. They do not appear, however, to have done,

1st Punjab Cavalry (1 troop).
No. 1 (Kohat) Mountain Battery (2 guns).
Half battalion, 2nd Punjab Infantry.

much in this direction. On the 4th November Lieutenant-Colonel A. H. Turner, commanding 2nd Punjab Infantry, occupied Domandi with the troops as per

margin. This is an important strategical position at the junction of the Khiddarzai with the Chuhar Khel Dhana and marked approximately the south-east angle of the theatre of operations, Drazand being at the north-east angle. Having established these two forces as stops at the eastern outlets of the Sherani country the advance was continued from the west.

Namar Kalan, the stronghold of the Khiddarzai section nestles at the foot of, and between three and four thousand feet below, the Maramazh heights. These heights tower almost perpendicularly above Namar Kalan, and cover it with a back wall most difficult to scale. From information received it appeared to Sir George White that the defiant attitude of the Khiddarzais was based upon the idea that this higher approach to their capital was inaccessible to a British force, and that consequently they could retire unmolested with their flocks and herds to these heights and adjoining grazing grounds on the precipitous spurs of the Takht-i-Suliman before our advance from the easier or eastern line of approach. The General Officer Commanding determined therefore to march a small but picked force over these heights and to descend upon Namar Kalan, while Colonel Nicolson was making a practicable road through the Chuhar Khel Dhana, a very direct pass from Baluchistan to the Derajat, which had been closed for some years by landships and large boulders blocking the river bed at some of its narrowest parts.

On the 31st October Colonel Nicolson's column, troops as per margin, accompanied by Sir Robert Sandeman and Mr. Bruce marched from Apozai towards the Chuhar Khel Dhana. Major Garwood, Commanding Royal Engineer and Captain Lamb, Deputy Assistant Adjutant General, also accompanied this column. Four days' rations were carried in regimental charge and six days' in commissariat charge.

No. 7 Mountain Battery, Royal Artillery (2 guns).
King's Own Yorkshire Light Infantry (2 companies).
18th Bengal Lancers (1 troop).
Head-quarters No. 1 Company, Bombay Sappers and Miners.
3rd Baluch Battalion.

On the 31st Colonel Nicolson marched to Kapip Kach ($8\frac{1}{2}$ miles) on the left bank of the Siliaza nala, and the following day to Mani Khwar (15 miles) crossing *en route* the easy Atsu Kotal (5,750') dividing the Ujasar plain from Spasta. On the 2nd November the march was continued to Sargasa Wasta (7 miles), a bad road for camels, and on the following day to Dhana Sar ($16\frac{1}{2}$ miles) where the stream enters the gorge which at its entrance looks like a mere crack in the hills. Colonel Nicolson accompanied by the Commanding Royal Engineer, Deputy Assistant Adjutant General and a small escort, proceeded 5 miles down the Chuhar Khel Dhana to inspect the practicability of the route for transport animals. It was found that no road or track existed, the bed of the stream had to be followed, and it was necessary to climb over boulders and rocks. The stream, varying from 6 inches to more than 2 feet in depth, flows through this gorge with great velocity, and the pass gradually narrows to 20 yards and in some places to a few feet, with cliffs on either side rising perpendicularly to 2,000 feet. The Commanding Royal Engineer reported that it would be impossible to make a road through it passable for camels in less than four days. All available men of the King's Own Yorkshire Light Infantry and of the 3rd Baluch Battalion were accordingly placed at the disposal of the Commanding Royal Engineer for employment as working parties on the road.

In the meanwhile, Sir George White with the remainder of the force, carrying ten days' rations and accompanied by Captain MacIvor and Mr. Donald as Political Officers, had marched from Apozai to Kapip Kach on the 1st November and the following day to Mani Khwar. From this camp a reconnoitring party under the Deputy Assistant Quarter-Master General for Intelligence was sent on to the Usha Kotal about 7 miles, and it was reported that the road up to this point was practicable for camel transport. Nothing, however, was known of the road beyond this *kotal*, except from native reports which are generally unreliable.

At 1-15 A.M. on the 3rd, the General Officer Commanding marched with a flying column, strength as per margin, from the camp at Mani Khwar, leaving the remainder of the column under Lieutenant-Colonel Morgan, with the baggage to follow later. The progress at first was slow owing to the darkness. After passing the Usha Kotal the road became very

No. 7 Mountain Battery, Royal Artillery (2 guns).
King's Own Yorkshire Light Infantry (1 company).
18th Bengal Lancers (1 troop).
No. 1 Company, Bombay Sappers and Miners (40 rifles).
2nd Baluch Battalion (200 rifles).

bad, and it was soon seen that it would be quite impracticable for laden camels. Orders were accordingly sent back to Lieutenant-Colonel Morgan to proceed to Sargasa Wasta instead of following the road taken by the General Officer Commanding. From Sargasa Wasta he was directed to send three days' supplies to meet the flying column at Wala. In the meanwhile, that column had made slow progress owing to the difficulties of the road which was barely passable for mules, and a halt of several hours had to be made two miles short of Wala to enable the rear-guard to close up. The village of Wala was found deserted and here the troops bivouacked for the night. The rear-guard did not arrive till 6 P.M., having been nearly 18 hours under arms, although the actual distance was not more than 12 miles.

At Wala information was received that the Khiddarzais aided by some members of other sections intended to oppose the advance at the crest of the

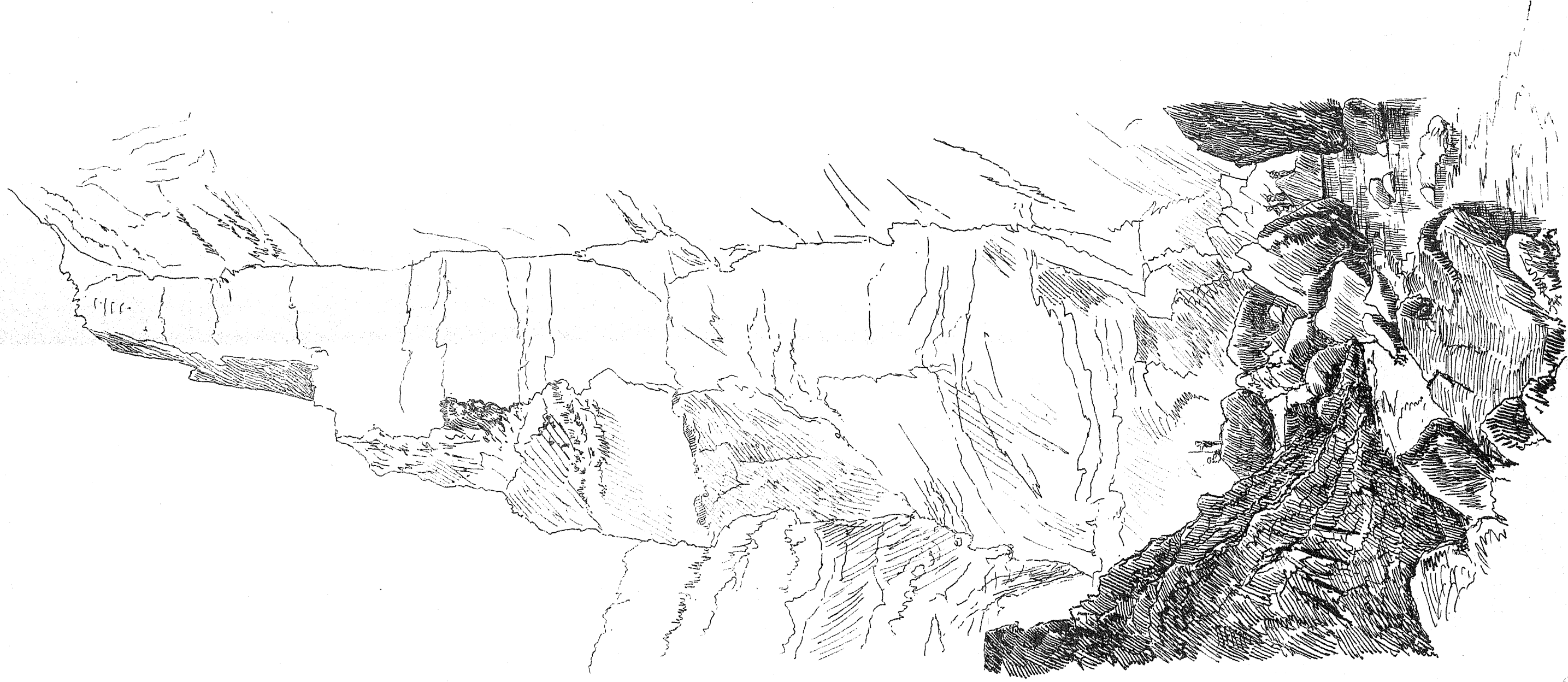
Over here the descent was made by General Sir S. White
on the 6th November 1890, on to Namar Kalan.



Bivouacs here

Densely wooded, with villages
concealed among the trees.

GENERAL VIEW OF MARAMAZH (8,310') FROM CAMP NAMAR KALAN.



IN THE CHUHAR KHEL DHANA,
8th November 1890.

A. B. September 1891.
Capt J. J. A.

(S3.) A. B. Crawford Moffat, Esq.,
2nd Battalion, R. O. M. S. S.

Leaving the camp here Colonel Ross pushed on up the *nala* and after passing the small village of Ambar the narrow part of the Khiddarzai Dhana was entered, the cliffs on either side rising to a considerable height. Here a halt had to be made to allow the men to construct a ramp up a huge rock which

Opposition offered to Colonel Ross's advance up the Khiddarzai Dhana.

blocked the road. The advanced guard had just begun to move forward again when several shots were fired in rapid succession, and on turning a corner near the village of Khushbina a sepoy of the 2nd Sikh Infantry was shot dead. Firing then continued from both sides of the *nala*, but no further loss was suffered, and the advanced guard occupied the village of Khushbina without further opposition. This village was situated in a position of great natural strength, completely commanding the approach from the east. Here the column was met by Sir George White, who with Lieutenant-Colonel Jeffreys, Assistant Adjutant General, and Mr. Donald, Political Officer, and an escort of 60 rifles, had come from Namar Kalan. After a short conversation with Colonel Ross, General White returned to his camp, taking with him seven Khiddarzai *maliks* who had come in and surrendered themselves after the skirmish above described. On his approaching Namar Kalan, Baluch Khan, Khiddarzai *malik*, who was then in camp, made his escape. Men of the 2nd Baluch Battalion gave chase and fired, but failed to capture him and he escaped into the hills. His companion Yarak Khan who ran away at the same time was, however, shot. In the morning Baluch Khan had stated positively that no opposition would be offered to the troops, and it is probable that hearing of the firing he had anticipated evil consequences to himself. On the 10th November he again came in and gave himself up.

In accordance with the orders he had received from the General Officer Commanding Colonel Ross occupied Nishpa on the left bank of the Khiddarzai Dhana opposite Khushbina, and held both those villages for the night; which passed quietly, but in some discomfort as no arrangements had been made for the troops bivouacking there, everything having been left behind at Karam.

On the same day (7th November) a squadron of the 18th Bengal Lancers and 100 rifles of the 3rd Baluch Battalion proceeded to Mogal Kot through the Chuhar Khel Dhana from Dhana Sar. The cavalry received orders to reconnoitre and open up communication with Lieutenant-Colonel Turner at Domandi, and the infantry were to assist in making the road from the Mogal Kot end of the pass.

On the morning of the 8th Major Creagh, v. c., with 100 rifles, 2nd Baluch Battalion, marched from Namar Kalan to Nishpa, Atal Khan Kahol, (5 miles), where he relieved Colonel Ross. That officer leaving behind 50 rifles, 2nd Sikh Infantry, with Major Creagh, returned to his camp at Karam. The village of Khushbina was destroyed this day as a punishment for the opposition which had been offered to Colonel Ross's advance.

On the same date Captain Mayne taking with him 50 rifles of the 2nd Baluch Battalion ascended the hills to the north-east of Namar Kalan to try and capture some flocks belonging to the Khiddarzais, which had been seen the previous day. His party was fired on but sustained no loss, and Captain Mayne brought back to camp bullocks, sheep, goats, &c., to the number of 199.

On this date (8th) the road through the Chuhar Khel Dhana was reported practicable for camels, and Sir Robert Sandeman escorted by two guns, No. 7 Mountain Battery, Royal Artillery, two companies, King's Own Yorkshire Light Infantry, and 100 rifles, 3rd Baluch Battalion, marched from Dhana Sar to Mogal Kot. Here news was received of the firing on Colonel Ross's party at Khushbina on the previous day and of the flight of Baluch Khan. Sir Robert Sandeman accordingly on the following morning, assembled in *darbar* the Sherani headmen, including all the Khiddarzais in camp, and explained to them that as, after the Khiddarzai headmen had come in and professed submission, they had treacherously and without excuse fired on the Government troops, it was no longer possible to place any confidence in their professions or to accept their submission as genuine.

Lower entrance of
Khiddarzai Dhana.

Nishpa (Atal Khan Kohol) Camp
of 100 men, 2nd Baluchis, under
Major O'Moore Creagh, V.C.

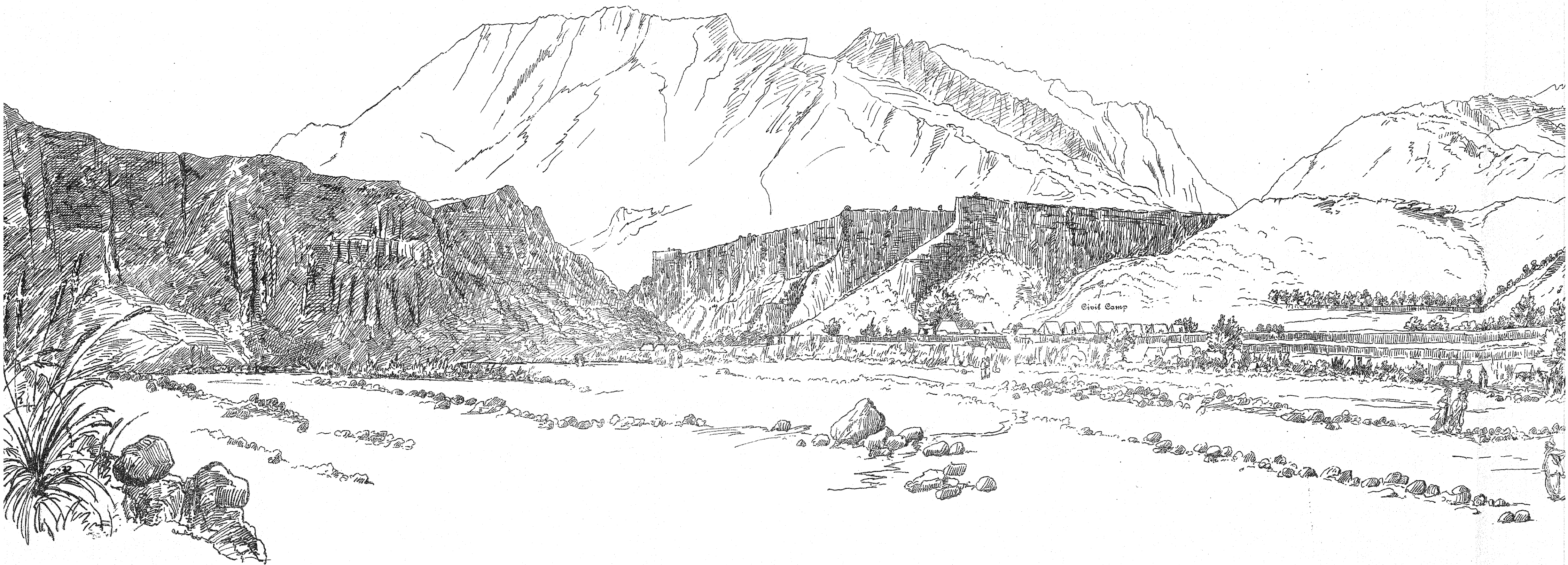
← To Namar Khan

Khushbina

This track leads on to a
plateau (thickly wooded)
towards Namar Khan.

Track here

VIEW IN THE KHIDDARZAI DHANA ABOVE KARAM LOOKING UP TOWARDS KHUSHBINA.
There are tiers of cultivated haches all round here.



LOOKING UP THE RIVER BED AT KARAM

The Political Camp in the foreground, the Military Camp is beyond the river behind the Political Camp.

He was therefore compelled to place the Khiddarzai *maliks*, who according to universal tribal custom were responsible for their tribesmen's action, in confinement, which was accordingly done.

On the 9th the General Officer Commanding accompanied by his Aide-de-Camp, the Deputy Assistant Quarter-Master General for Intelligence, and Captain MacIvor, Political Officer, started *viâ* the Walwasta route for Mogal Kot to confer with Sir Robert Sandeman, taking with him the Khiddarzai prisoners. The night was spent at Dhana War (9 miles), and the following morning the march was continued down the Chuhar Khel Dhana for 5 miles to Mogal Kot, which was reached at 9 A.M. About $3\frac{1}{2}$ miles from Dhana War some petroleum springs were passed in the bed of the *nala*. The quality of the oil in these springs is pure, but the supply is scanty. After Sir George White had conferred with Sir Robert Sandeman, with reference to the plans for his future movements, the latter accompanied by an escort marched to Parwara (8 miles) *en route* to Karam.

Colonel Nicolson with the remainder of his column arrived at Mogal Kot on the 10th from Dhana Sar. The first five miles of the road was found still very difficult for camels. The column under Lieutenant-Colonel Morgan moved up from Sargasa Wasta to Dhana Sar to take the place of Colonel Nicolson's column.

Colonel Ross, on this date, made a reconnaissance from Karam, visiting the villages of Torkhanai, Bohaur, Shina Kazha and Masora. All the fire arms that could be collected were brought away. The villages were almost deserted, but the people were beginning to return.

On the 11th the General Officer Commanding and staff returned from Mogal Kot *viâ* Warghari (10 miles). Sir Robert Sandeman and Mr. Bruce on the same day arrived at Karam Hezai, and a *darbar* was held in the afternoon when the whole Sherani *jirga* was received. Colonel Nicolson's column marched on this date from Mogal Kot to Parwara, and on the following day Lieutenant-Colonel Turner moved from Domandi and occupied Mogal Kot with 1 troop, 1st Punjab Cavalry, two guns, No. 1 (Kohat) Mountain Battery, and a wing of the 2nd Punjab Infantry.

Colonel Nicolson's column halted at Parwara on the 12th to rest his camels, and marched to Karam on the 13th relieving the troops under Colonel Ross which were under orders to return to Drazand.

In the meanwhile, Major Creagh at Nishpa had not been idle. With the detachment under his command he had scoured the slopes of the Takht and had succeeded in collecting in all 80 cows, 14 donkeys, 62 goats, 114 sheep and 20 maunds of Indian corn, which were handed over to the political authorities. Some of these on enquiry were found to belong to the Atal Khan Kahol and other friendly sections and were restored to the owners; those belonging to the Khiddarzais were retained.

During the so-called Takht-i-Suliman expedition in 1883 our troops visited

Ascent of the Takht-i-Suliman.

the western or Kaisarghar ridge of the great mountain mass situated between the Gat and Khiddarzai Dhana, but the eastern ridge, which culminates in the celebrated Takht-i-Suliman, was not visited. Sir George White therefore determined to march troops to the top of this range, and to ascend by its precipitous eastern face, and thus effectually roll up the curtain of obscurity which had hitherto shrouded this fabled throne, and show the people that even the rugged path up the face of the Takht though impassable for mountain cattle and sheep could be traversed by British troops. Accordingly on the 12th November General White accompanied by Lieutenant Jackson, D. S. O., Aide-de-Camp, Captain Mason, Deputy Assistant Quarter-Master General for Intelligence, and 50 rifles, King's Own Yorkshire Light Infantry, under Captain Milton, marched from Namar Kalan to Nishpa; thence taking Major Creagh, V. C., with 50 rifles, 2nd Baluch Battalion, and Mr. Donald, Political Officer, he started for the Takht. At sunset the Sultanzai village of Zindawar was reached. The distance from Nishpa was only 6 miles, but the road was very bad for mules, there being an ascent of 2,000', and a descent of nearly 1,700'. The General bivouacked at Zindawar, the villagers being friendly. The baggage did not arrive before.

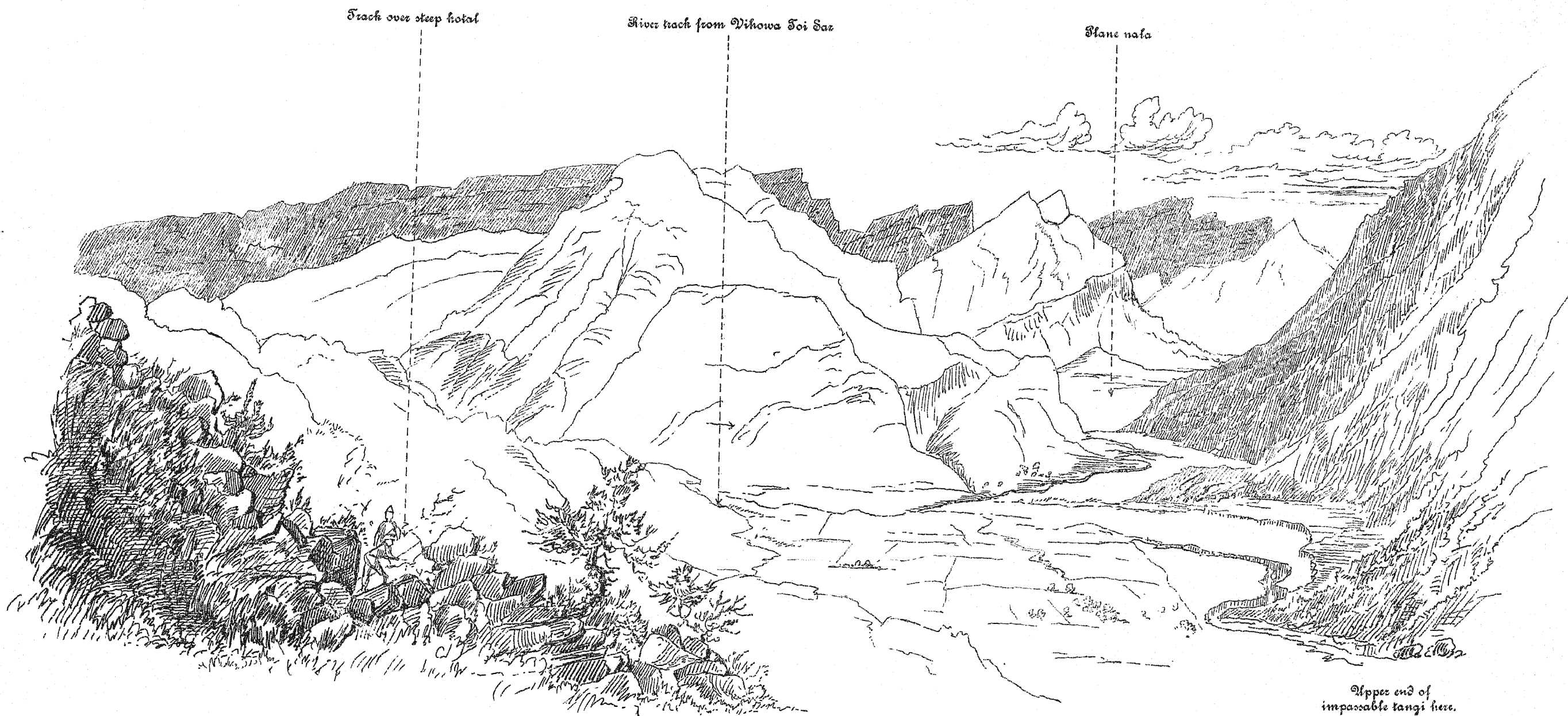
dark and had to remain out all night, the baggage guard with Captain Milton bivouacking on the road. The night was one of discomfort as there were six degrees of frost and many of the men had neither their kits nor were they able to obtain water to drink. At 8 A.M., on the morning of the 13th, the baggage arrived, and, after having breakfasted, the whole party advanced to Tora Tizha (3 miles). Here the mules were ordered to be left behind and officers and men to go on with their great coats and blankets and one day's cooked rations. From Tora Tizha the path zig-zagged for two miles up to the foot of the final ascent to the crest of the Takht range, and here the party bivouacked for the night near the Sighrai spring (7,400'). The ascent made this day was 3,500 feet. The night spent at Sighrai was a trying one for officers and men owing to the intense cold and the small amount of clothing it had been possible to carry up. At 6 A.M. the ascent to the crest was commenced, and after about $2\frac{1}{2}$ hours of steady climbing the summit of the Manzalara Kotal was reached. As it would have taken too long to go to the shrine, it was decided not to attempt it,* and after opening up heliographic communication with Drazand and Namar Kalan, the descent to Tora Tizha was made, and here the force bivouacked for the night. The ascent to the crest of the Takht-i-Suliman range was found to be very difficult in places, and here and there the men had to go up on their hands and knees. From the top of the Takht a grand view was obtained over the plains of India to the east, and to the west the high plateau of Maidan covered with pine forest with the Kaisarghar range on the other side was seen. In his despatch Sir George White says: "The ascent of the Takht-i-Suliman was far the most difficult operation in a physical point of view, I have ever called upon soldiers to perform, and the fact that British soldiers and Baluch sepoy, fully accoutred, scaled these dangerous heights, will not be lost on the Sheranis." On the 15th November the General and his party marched from Tora Tizha to Karam (16 miles) passing through the Sultanazai villages of Jat Aghbazz and Raghasar. The descent from Tora Tizha to the Wagarai *nala* was steep, but quite practicable for mules. From there the road to Karam Hezai presented no difficulties. This route is much easier than the one from Nishpa *via* Zindawar.

On the 14th November Captain MacIvor, Political Officer, with an escort of 150 rifles, 3rd Baluch Battalion, and accompanied by Lieutenant Southey, Field Intelligence Officer, and Captain Mackenzie, Assistant Survey Officer, left Karam to explore the Khiddarzai Dhana, and returned on the 16th having visited Karim Kach. They reported the road easier than the one over Maramazh by which the advance was made to Namar Kalan. In the meantime working parties were being employed in improving the roads through the Sherani country, the important points of which Karam, Drazand, Nishpa, Namar Kalan, Mogal Kot and Dhana Sar were all now occupied by British troops.

On the 17th November the cases against the Khiddarzais and other Sheranis were brought up before a committee assembled at Karam composed of Sir Robert Sandeman, Mr. Bruce, Captain MacIvor and Lieutenant McMahon. The circumstances of each case were considered and orders passed for their settlement. The fine to be imposed upon the Largha Sheranis was fixed at Rs. 5,000, divided as follows:—Uba Khel (including the Khiddarzai sub-section), Rs. 2,500, Hassan Khel, Rs. 1,500, Chuhar Khel, Rs. 1,000.

On the 18th Sir Robert Sandeman held a final *darbar* at Karam at which he announced to all concerned the results of the operations against the Khiddarzais, and also the terms imposed upon the Sherani tribe as a whole; *khillats* were at the same time bestowed on some of the headmen of Bargha and Zhob who had rendered good service during the expedition.

* Captain MacIvor and Lieutenant McMahon visited the shrine at the end of June 1891. They ascended the range from the Pazai springs and having visited the shrine bivouacked on the crest, returning to the Pazai springs on the following day.



VIEW ON THE VIHOWA RIVER,
looking up the Blane nala from the hotel at the head of No. 1 tangi, round which
a road had to be made—the tangi being impracticable,
25th November 1890.

J. B., September 1894.
Said J. A. A.

(Sd.) A. W. Crawford McFall, Lieut.,
2nd Battalion, H. O. Yorkshire, L. I.

The terms were briefly :—

1st.—That Murtaza Khan and the refugees, if in the Sherani country, should be surrendered, or, in the event of their having left the country as had been reported, that they should not be permitted to return there.

2nd.—That a fine of Rs. 6,000 should be imposed upon the tribe, including Rs. 1,000 inflicted on individuals for offences committed by them in Dera Ismail Khan and Zhob.

3rd.—That the Khiddarzai *maliks* and other refractory members of the tribe who had either surrendered or been taken prisoners should be detained as hostages until all the terms had been fulfilled.

Sir Robert Sandeman then placed the political results before the General Officer Commanding, and intimated that these were in his opinion eminently satisfactory.

The objects for which the Zhob Field Force had been organized having thus been successfully accomplished, a field force order was published in which the General Officer Commanding thanked all ranks for their cordial co-operation and exemplary conduct.

Termination of the operations and break up of the force.

It now only remained to send back the different corps to their several destinations, utilizing their return marches to open out as many lines of communication between the Derajat and Baluchistan as possible. The following orders were accordingly issued consequent on the breaking up of the force :—

King's Own Yorkshire Light Infantry and head-quarters No. 1 Company, Bombay Sappers and Miners, to march on the 18th *viâ* the Chuhar Khel Dhana and the Vihowa pass to Dera Ghazi Khan, thence rail to Quetta.

3rd Baluch Battalion and a detachment of Sappers and Miners to march on the 19th *viâ* Drazand to the Zao pass, and after opening a camel road through it to proceed to Apozai.

18th Bengal Lancers and 2nd Baluch Battalion to march on 19th *viâ* Dhana Sar, Musa Khel Bazar and Murgha to Loralai. The British and native field hospitals to accompany this column as far as Loralai proceeding from there to Harnai and thence to Quetta.

The head-quarters to march on the 19th to Dera Ismail Khan and thence by rail to Quetta.

Colonel Ross to hold Drazand until the Sherani fine was paid up, and civil arrangements completed.

Lieutenant-Colonel Turner to march to Dera Ismail Khan from Mogal Kot on the 20th.

No. 7 Mountain Battery, Royal Artillery, escorted by 100 rifles, 2nd Baluch Battalion had already (on the 12th) marched from Dhana Sar for Apozai *en route* to Quetta *viâ* the Zhob valley.

After the *darbar* on the 18th November Sir Robert Sandeman left Karam for Dera Ismail Khan and Quetta, and the following day Sir George White and staff with the 3rd Baluch Battalion and the detachment of Sappers and Miners under Colonel Nicolson marched to Drazand. From that place the General Officer Commanding proceeded to Dera Ismail Khan *viâ* Draband and Kulachi and on the 23rd having relinquished the command of the field force returned by rail to Quetta.

It is only necessary to describe briefly the march of the troops under Major Symons moving by the hitherto unexplored Vihowa route to Dera Ghazi Khan and of the column under Colonel Nicolson returning by the Zao pass to Apozai. The other columns marched by well known routes and arrived at their destinations without incident.

The Vihowa column consisted of the King's Own Yorkshire Light Infantry and the head-quarters of No. 1 Company, Bombay Sappers and Miners, and was accompanied by Major Garwood, Commanding Royal Engineer, and Lieutenant Southey, Field Intelligence

Return of column under Major Symons *viâ* the Vihowa pass.

Officer. The column, having assembled at Dhana Sar, marched from there on the 22nd November to Lewaghwazh (19 miles) and the following day reached Vihowa Toi Sar (9½ miles). Here a halt was made for one day, while reconnoitring parties went out to examine the road forward. On the 25th the column marched to Tangi Sar (12 miles), encamping about ¾ mile from the mouth of the Kurman *tangi* which was found in reality to consist of two short *tangis*. After reconnoitring this defile, Major Garwood reported that, with the tools and labour at his disposal, it would be impossible to make a camel road through it in less than three weeks. It was, however, found that the *tangi* might be turned by a road going over the range to the north, which could be made in about three days. Work was accordingly commenced on this latter road, but progressed slowly owing to the heavy rain which fell for three successive days. On the 29th it was sufficiently advanced for one company of the King's Own Yorkshire Light Infantry and the Sappers and Miners to traverse it and they encamped in the Sema *nala* on the other side (distance 15¾ miles), the remainder of the force moving to this camp on the following morning. Here it was found that there was yet another *tangi* about half a mile further on, known as the Gat *tangi*, to be passed. Every available man was put on to work at the road through this, and on the evening of the 1st December it was reported open. On this day Lieutenant Southey, Field Intelligence Officer, started from the camp at Sema to reconnoitre the road over the Zhba Kotal and thence *via* the Guzai *nala* to Vihowa. This was found to be no shorter, and considerably more difficult than the route followed by the column. On the 3rd the whole force had passed through the Gat *tangi* and marched to Kaiwahan (7¾ miles) by an easy road over a stony plateau. From Kaiwahan to Vihowa it is three marches (Chitarwata, 13¼ miles, Garibar, 8½ miles, Vihowa, 15 miles). The road first went by an easy ascent to the Lawargi Kotal, then descended to the Badri *nala*, a tributary of the Vihowa, and did not again leave the river bed till it emerged into the open plain near Vihowa. The column arrived at the last named place on the 6th December, and, after a day's halt, continued the march to Dera Ghazi Khan which was reached on the 12th, and from thence the troops returned to Quetta by rail.

The march of this column through the Vihowa entailed hard work on the men, and the difficulties were much increased by the continued rain and consequent heavy floods. One man of the King's Own Yorkshire Light Infantry was accidentally killed on the 2nd December by a falling stone, but with this exception the march was without any casualty. Major Symons, commanding the column, and Major Garwood, Commanding Royal Engineer, reported that a good road could be easily and at no great expense made through this pass, Major Garwood also stated that a permanent high level road could without difficulty be blasted through the *tangis* by a company of Sappers with a liberal expenditure of dynamite in six months, and he recommended that a first class road should be made for the few miles in the pass itself which are now difficult, the rest of the road being left in its present condition which is quite practicable for camels. There is water, grazing, wood and cultivation throughout the route.

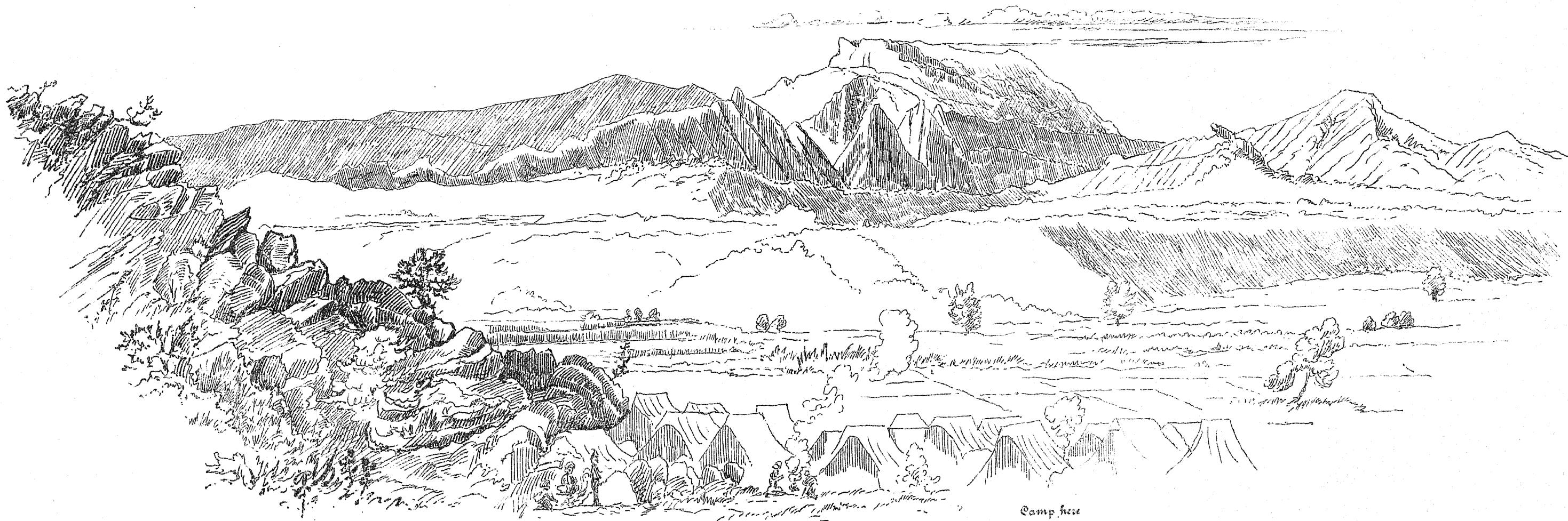
It now only remains to describe briefly the movements of the column under Colonel Nicolson and the events previous to the withdrawal of Colonel Ross's column from the Sherani country.

Return of column under Colonel Nicolson to Apozai *via* the Zao pass and withdrawal of Colonel Ross's column from the Sherani country

As already mentioned, Colonel Nicolson, with the 3rd Baluch Battalion and detachment of Sappers and Miners, marched from Karam to Drazand on the 19th November. Here he had to halt for supplies, and these did not arrive until the 22nd. In the meantime Colonel

3rd Punjab Cavalry. ... 40 sabres.
No. 7 (Bengal) Mountain Battery (2 guns).
1st Sikh Infantry ... 290 rifles.

Ross, with the troops as per margin, accompanied by Mr. King, Deputy Commissioner of Dera Ismail Khan, who wished to visit the Sultanzai and Hassan Khel countries, had marched on the 16th November from Drazand to Raghasar, the chief village of the Sultanzai section. A halt having been made at this place for one day Colonel Ross marched on the 18th to Murgha, the largest of the Larga Hassan Khel villages. Here



VIEW OF MISRI ROH, (10,200')
from Camp Kaiwahan, looking N.-W.,
3rd December 1892.

(Ed.) A. W. Crawford McFall, Lieut.,
2nd Battalion, N. C. Yorkshire, I. I.

J. B., September 1894.
Sed. J. A. A.

he established his head-quarters while Mr. King explored the Hassan Khel country. The details of Mr. King's movements are given in his diary which is attached (*vide* Appendix E). On the 20th Lieutenant McMahon, Assistant Political Agent, Zhob, joined Mr. King at Murgha, and a settlement of cases still pending was arrived at. Little delay was shown in the payment of the Sherani fine. By the 24th November the Uba Khel and Hassan Khel sections had paid up their respective portions and only the share of the Chuhar Khel (Rs. 1,000) remained unpaid. The distance at which this section lived from Murgha, and the heavy rains which set in at this period and which continued for days accounted for some delay in the collection of this last amount. The whole fine was, however, paid up in full by the 29th November, and Colonel Ross on that day withdrew the troops from Murgha, and rejoined the rest of his column at Drazand. On the 2nd December he evacuated the Sherani country, marching with his whole column from Drazand to Draband. On the same date Murtaza Khan, the fugitive Khiddarzi *malik*, arrived at the Shah Alam post and surrendered himself to Mr. Broadway, District Superintendent of Police, on duty at Draband.

To return now to the movements of the 3rd Baluch Battalion and the detachment of Sappers and Miners under Colonel Nicolson. On the 23rd November this column carrying 15 days' supplies marched from Drazand to Murgha (7 miles) where Colonel Ross was then in camp. The road followed the general direction of the Drazand Zam. On the following day a halt was made while the east end of the Gat defile was explored. On the 25th Colonel Nicolson marched from Murgha to Sur Kach (8 miles) passing at 2½ miles the large village of Wazir Kot, the residence of the Hassan Khel chief, Palak Khan. On the following day the march was continued to Gandari Kach (7 miles) at the mouth of the Zao pass, and, on arrival at this camping-ground, work was at once commenced upon the road through the defile, which was reconnoitred as far as the Siri rock. There was heavy rain all day, and in consequence frequent falls of conglomerate and masses of rock from the hill-sides, rendering caution necessary. The tents did not arrive till 6 p.m. During the night the rain continued. On the morning of the 27th a party of twenty men, including a *naik* and three sepoys of the 3rd Baluch Battalion, some regimental camel *sarwans* and Sherani followers had taken refuge from the rain beneath a cliff below the entrance of the defile, when a fall of conglomerate took place and buried them; only two men were taken out, one dead and the other in a dying state. The working parties sent to try and dig out the bodies, nearly met with a similar fate, a second landslip taking place. Further falls of earth occurred during the day rendering all efforts to recover the dead hopeless. Work was continued this day on the road through the defile. On the 28th the weather cleared and work in the pass was carried on. Nine of the bodies buried in the landslip on the previous day were recovered after great labour. They were found crushed almost beyond recognition. Lieutenant McMahon, Assistant Political Agent, Zhob, joined the camp from Murgha on this date. On the 29th work was resumed in the pass, but at night a thunderstorm accompanied by very heavy rain took place, and the torrent rose to 6 feet in height, destroying a great part of the ramping work which had been executed on the previous days. On the 30th working parties were employed in repairing the damage done and in dealing with obstacles beyond the Siri rock. A reconnaissance was also made of the road from the Zao defile to Kashmir Kar. Mr. King, Deputy Commissioner, Dera Ismail Khan, joined the camp on this day.

By noon on the 1st December the road through the pass was completed, and Colonel Nicolson with the 3rd Baluch Battalion and the detachment of Sappers and Miners marched through it from Gandari Kach to Kamal Kulia (9 miles). The camels passed through the defile without a hitch. A detailed description of the Zao pass is given in the routes at the end of this report. Further particulars of the Zao and Gat defiles compiled by Lieutenant McMahon are given in Appendix F. Details are therefore unnecessary here. Suffice it to say that of the four parallel routes in

the Sherani country through the Suliman range, explored during the expedition, *i.e.*, the Chuhar Khel Dhana, Khiddarzai Dhana, Gat and Zao, the last is the easiest and the Gat by far the most difficult. In its present state the latter is totally impassable for animals and almost so for footmen. With regard to the Chuhar Khel Dhana, Major Garwood reported that there would be no insuperable engineering difficulty in making a good permanent road by blasting galleries in the solid limestone above flood level, but such a road would be expensive to make.

Mr. King and Lieutenant McMahon left Colonel Nicolson's column on the 1st December and marched from Gandari Kach to Kashmir Kar, from whence the former returned to Dera Ismail Khan *via* the Gomal and the latter proceeded to Apozai, following the route of the column.

On the 2nd December Colonel Nicolson marched from Kamal Kulia to Mazrai Kach (10 miles), and during the day the west end of the Gat defile was explored. On the 3rd the march was continued to Amandi Dar (11 miles) and the following day to Barkhardar's fort (15 miles), about 2 miles north-west of the camping-ground of Mani Khwar where the force had halted on the 1st and 2nd November when advancing into the Sherani country. From here Colonel Nicolson marched to Kapip Kach (16 miles) and the next day to Apozai ($8\frac{1}{2}$ miles).

It is not necessary to describe in detail the action subsequently taken for the re-establishment of friendly relations with the Larga division of the Sherani tribe, but it may be mentioned that as a result of the expedition and the knowledge that had been gained of the country, the Government of India approved and confirmed the arrangement arrived at after Sir Robert Sandeman's expedition of 1889-90, in accordance with which the Bargha section of the tribe on the west of the Suliman range was placed under the control of the Agent to the Governor-General in Baluchistan, while the Largawals, on the east of the range, were to continue as heretofore to be managed by the Punjab Government.

The terms of the final settlement made with the Larga Sheranis are given *in extenso* in Appendix G, and were briefly as follows :—

(1) The Zao, Khiddarzai and Chuhar Khel passes to be kept open and the tribe to be responsible for the safety of caravans and travellers using these passes.

(2) British officers and other Government servants to be at liberty to travel in any part of the Sherani country. The tribe to be responsible for their safety.

(3) All arrangements with the tribe to be carried out through its headmen, and if the Government orders should be disobeyed or disregarded, the Government to be at liberty to re-occupy the country.

(4) The taking of selected hostages for the future good faith of the tribe.

(5) The tribe to be responsible for the acts of its individual members.

(6) The restoration and redistribution of service, pay and allowances of the Largawals.*

(7) The establishment of levy posts at Mogal Kot, Nishpa (Atal Khan Kahol), Gandari Kach, Drazand and Domandi.†

							Rs.
* Hassan Khel	...	...	...	...	...	...	202 <i>per mensem.</i>
Chuhar Khel	...	...	...	...	...	...	155
Uba Khel	...	...	...	...	...	...	560
						TOTAL	917

† These have now been completed, but the second named post has been built at Khushbina and not at Nishpa (Atal Khan Kahol).—A. H. M.

The punishment, to be awarded to individual members of the tribe such as Murtaza Khan, Ranagul, Sadagul, &c., for specific offences was excluded from the general settlement. These cases were tried on their merits and suitable punishment in each has now been awarded.

After the final settlement had been made the remainder of the prisoners at Dera Ismail Khan were released on the security of the tribal *jirga*.

In Appendix H a brief account by Mr. King of the principal customs prevailing among the Sheranis is given. Appendix I is a statement showing the main sub-divisions, sections and sub-sections, &c., of the Largha and Bargha divisions of the Sherani tribe. This was prepared by Mr. Bruce under the most favorable circumstances, while the force was encamped in the Sherani country, and when all the headmen were present, and it may be entirely depended upon.

In Appendix J are given various reports sent in at the end of the operations relative to the working of departments, &c., with notes and remarks by Sir George White.

The report of the survey operations is given in Appendix K. Appendix L is a statement showing the number of transport animals employed. The routes followed by the different columns of the Zhob Field Force are shown in Appendix M, the detailed route reports of all new roads traversed by the force being given in Appendix N.

Sir George White, after describing the operations of the force under his command, concludes his despatch in the following words:—

Sir George White's despatch. General summing up.
Mention of officers.

"The Zhob Field Force may be said to have been employed for two months. During that time the columns composing it marched in the aggregate 1,800 miles. Of this distance, 828 miles were over new routes which had never before been followed by a British force, and to traverse which the troops had often to make their own roads. The details of each day's march and the military intelligence collected have been very fully given in the diaries which, with maps, have been periodically forwarded to Army Head-Quarters. The results of the operations have been rather political than military. All arrangements in the first phase were made with the studied object of making friends and not of conquering enemies.

In the operations against the Sheranis the strength of the force together with the dominating positions which it gained on all sides, left no alternative to the tribesmen but submission. It has, however, been ascertained with certainty that, before our approach they had sat in *jirga*, and the various sections of the tribe had bound themselves to oppose the British advance into their country with their united strength.

The operations entailed upon officers and men exertions and exposure of an exceptional kind. The character of the country, in some instances, prevented the use of transport animals; the men had then to carry bedding, rations, and cooking pots for themselves, and to sleep without tents in a temperature of from 13° to 20° of frost. The marching was always over rocks and stones, and often in river beds where the water ruined boots and clothing, entailing heavy expense on the soldiers, both British and native.

I would beg to bring to the favourable notice of the Commander-in-Chief the following officers who commanded corps:—

Colonel M. H. Nicolson, commanding the 30th Bombay Infantry (3rd Baluch Battalion), who, throughout nearly all the operations, commanded a separate column, and who opened a road through both the Chuhar Khel and Zao Dhanas.

Lieutenant-Colonel H. R. L. Morgan, Royal Artillery, commanding No. 7 Mountain Battery.

Major O'M. Creagh, v.c., commanding the 29th Bombay Infantry (2nd Baluch Battalion).

Major H. C. Symons, commanding the 2nd Battalion, King's Own Yorkshire Light Infantry, and who commanded the column that established communication through the Vihowa pass.

Major G. L. R. Richardson, commanding the 18th Bengal Lancers.

Of the departmental officers, Deputy Surgeon-General S. A. Lithgow, C.B., D. S. O., an officer of great experience in the field, did much to promote the success of the expedition.

Lieutenant Colonel J. R. Burlton-Bennet, Chief Commissariat Officer, did all that forethought and arrangement could do to equip the force with transport and commissariat supplies, and to stock the magazines in the field, but as he was at the same time carrying on the duties of Chief Commissariat Officer of the Quetta district, it was not for the interest of the Service that he should be present with the field force throughout. The executive commissariat charge therefore fell on Lieutenant J. W. G. Tulloch.

Major J. F. Garwood, Royal Engineers, was Commanding Engineer of the force. Owing to the nature of the country marched over, his work was most important. He opened roads practicable for camels through the Chubar Khel Dhana and Vihowa pass, and was constantly employed in minor works of the same character. His services were most valuable.

Surgeon-Major G. J. H. Evatt had charge of two sections of the 23rd British Field Hospital, and worked with characteristic zeal, ability, and powers of organization.

Of the officers serving on my immediate staff I would name the following :—

Lieutenant-Colonel P. D. Jeffreys, Assistant Adjutant General of the force, was my chief staff officer and right hand man throughout, and proved himself as valuable a staff officer in the field as I have invariably found him in quarters. I commend him to the special notice of His Excellency the Commander-in-Chief as an officer whose advancement would be a benefit to the Service.

Captain A. H. Mason, Royal Engineers, Deputy Assistant Quarter-Master General for Intelligence, and Captain J. Lamb, Deputy Assistant Adjutant General, rendered me willing and valuable assistance.

I have reserved for special mention two officers, not at the head of corps or departments whose individual services have earned special recognition from me :—

Lieutenant J. W. G. Tulloch, Executive Commissariat Officer to the force. I consider that no officer rendered such valuable service to the State as this most promising young commissariat officer. The numerous detachments into which I divided the force were often placed in positions where ordinary pack animals could not carry supplies, and in a country destitute of provision of all kinds, the supply question was thus a very difficult one. I cannot speak too highly of the way in which Lieutenant Tulloch carried out his duties. He is worthy of a higher post in his department.

Captain P. W. A. A. Milton, King's Own Yorkshire Light Infantry, was with me in all the operations in which I had to call upon the officers and men for exceptional efforts, and to his irresistible example, careful arrangement, and capacity for command I owe, in a great measure, the complete success which attended them. He is one of the few officers I have met endowed equally with dash to lead an advanced guard and patience to bring in a rear guard. He served under me in Burma in command of mounted infantry, where his services were also most valuable.

Colonel A. G. Ross, C.B., commanding the contingent of the Punjab Frontier Force placed under my command, co-operated with me most effectively, and made very careful and well-considered arrangements throughout.

Lastly, I would beg to record my acknowledgment of the great assistance which I have invariably met with from Colonel Sir Robert Sandeman, K.C.S.I., and the political officers serving under him. I would especially name—

Captain I. MacIvor, Political Agent, Zhob.

Major G. Gaisford, Political Agent, Quetta.

Mr. J. S. Donald, in political charge of the Gomal.

Where the work to be done was so largely political, it was of the first importance that the military and civil should work together harmoniously and whole-heartedly. Sir Robert Sandeman's high status and great political experience made his position with a field force one of exceptional weight and importance, and I recognise very fully the consideration which he has invariably shown to me as military commander."

In addition to the above Sir Robert Sandeman in his report brought to notice the services of Mr. R. I. Bruce, C.I.E., Officiating Commissioner of the Derajat, and the officers serving under him.

In forwarding Sir George White's despatch to the Government of India by direction of the Commander-in-Chief, the Adjutant General in India said: "The first phase of the expedition, although explorative rather than militant, demanded from all ranks exertions of a kind very unusual even in a protracted campaign; and the final operations undertaken for the coercion of the Khiddarzai gave fresh examples of the endurance and enterprise of the troops and their commander. The excellent dispositions made by the latter resulted in the speedy submission of the recalcitrant tribe, which relying on the inaccessibility of its mountain fastnesses has hitherto maintained a defiant attitude.

"His Excellency has much pleasure in again bringing to notice the services of Major-General Sir George White, whose distinguished conduct of operations in the field has so often obtained the approval of Government."

In acknowledging the receipt of this letter the Secretary to the Government of India, Military Department, said : " In reply, I am to say that the Governor-General in Council has read Sir George White's report with much satisfaction, and cordially appreciates the good work done by the troops under trying circumstances, and the ability, judgment and vigour with which the operations have been conducted by Sir George White."

This correspondence and the despatch were published in G. G. O. No. 214, and appeared in the *Gazette of India* of March 7th, 1891, being republished in the *London Gazette* of May 19th, 1891.

Appendix A.

DETAIL OF STAFF.

Major-General Sir G. S. White, K.C.B., K.C.I.E., V.C.	... Commanding the force.
Lieutenant S. C. F. Jackson, D.S.O., Hamp- shire Regiment	... Aide-de-Camp.
Lieutenant-Colonel P. D. Jeffreys, <i>h. p.</i>	... Assistant Adjutant General.
Captain J. Lamb, B. S. C.	... Deputy Assistant Adjutant General.
Captain A. H. Mason, R.E.	... Deputy Assistant Quarter-Master General for Intelligence.
Lieutenant R. Southey, Eo. S. C.	... Field Intelligence Officer.
Major J. F. Garwood, R.E.	... Commanding Engineer.
Lieutenant C. J. Luard, 2nd Durham Light Infantry	... Assistant Superintendent, Army Signalling.
Captain J. Monteith, Bo. S. C.	... Baggage Master and Provost Marshal.
Deputy Surgeon-General S. A. Lithgow, M.D., C.B., D.S.O.	... Principal Medical Officer.
Lieutenant-Colonel J. R. Burlton-Bennet, B.S.C.	... Chief Commissariat Officer.
Lieutenant J. W. G. Tulloch, B.S.C.	... Executive Commissariat Officer.
Lieutenant H. B. Murray, B.S.C.	... Transport Officer.
Lieutenant-Colonel T. H. Holdich, R.E.	... Survey Officer.
Captain R. J. H. L. Mackenzie, R. E.	... Assistant Survey Officer.

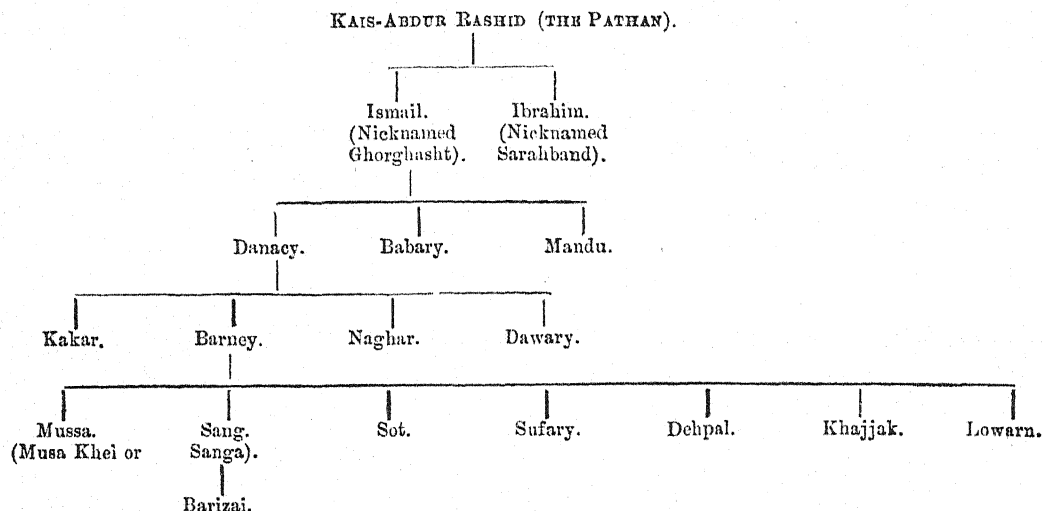
POLITICAL STAFF.

Colonel Sir R. G. Sandeman, K.C.S.I., B.S.C....	Agent to the Governor-General and Chief Commissioner, Baluchistan. Chief Political Officer with the force.
Major G. Gaisford, B.S.C.	... Political Agent, Quetta and Peshin.
Captain I. MacIvor, B.S.C.	... Political Agent, Zhob.
Lieutenant C. Archer, B.S.C.	... 1st Assistant to Agent to the Governor-Gen- eral.
Lieutenant A. H. McMahon, B.S.C.	... Assistant Political Agent, Zhob.
Surgeon-Major J. C. Fullerton, I.M.S.	... Agency Surgeon.
Mr. R. I. Bruce, C.I.E.	... Officiating Commissioner, Derajat.
Mr. L. W. King, C.S.	... Deputy Commissioner, Dera Ismail Khan.
Mr. J. S. Donald	... Assistant Commissioner, Tank.

Appendix B.

Note on the Lowanas by Captain MacIvor.

The Lowanas or Lowanus (the name is properly I believe spelt Lowarn) are a small Ghorghasht Pathan tribe with settlements, so far as I am aware, in only two places, namely, (1) at southern Tirwah and on the Kundar river, between Kundar Nigange and Nakhal; and (2) at Sangan in the Harnai district. In the latter place they comprise the largest section of the Panni or Parni inhabitants of that place. Lowarn, the progenitor of the tribe, is said to have been one of the sons of Parnaly, so that the Lowanas are Pannis. According to Raverty the genealogical tree is as follows:—



If this is correct it will be seen that Kakar was the uncle of Lowarn, and that the Lowanas down at Sangan are among their kindred, the Sang and Barozais (or Borizai) of Sangan, and have other connections, the Safis, Dehpals, Barozais, and Khajjaks close by in the Sibi district. The Lowanas would also be closely related to the Musa Khels and Sots. These Lowanus state that they are divided into four sub-sections: (1) The Manderzai; (2) Ismailzai; (3) Husainzai; and (4) Nurozai. The two first named sections number about 80 men each and the two latter about 35 each, so that the strength of the tribe here is only about 230 men. The Manderzai, Ismailzai, Nurozai, and half of the Husainzai occupy the country to the immediate south of Taraki Tirwah and between the Buskantoi or Tirwah river, and the Wali Murgha, while the remaining half of the Husainzais live on the Kundar, their limits commencing some 6 or 7 miles east of Nigange and running down to Nakhal at the junction of the Kundil and the Kundar. The Lowanas immediately south of Tirwah have two *karezes*, one Saleh *karez*, owned by the Ismailzai, and another Kamr-ud-din *karez* owned by the Manderzai. The water of the Tirwah stream is divided into 21 parts and the Tarakis own 9 at the head water, while 12 parts below belong to the Lowanas.

Regarding the status of the Lowanas I have never yet heard any doubt expressed by the natives, but that they belong to the Kakar *raj*, and own allegiance to the Jogizai family. Every Ghilzai I have asked has told me at once that the Lowanas are of the Kakar Jam and have nothing to say to the Ghilzais.

In the list of the dues paid by the different sections of the Kakar tribe to the Jogizai family, compiled before I came to Zhob, the average payments of the Lowanas are entered as Rs. 380 yearly. This sum, before the first Zhob expedition, used to be divided between Sardar Shah Jahan and Dost Muhammad, but latterly when Bangal and Dost Muhammad had their quarters at Thanishpa and on the Kundar, they took good care that not a rupee of it should reach Shah Jahan or Shingul, and the contributions they levied from the Lowanas were not confined to this amount.

Apart from the fact that both the Kakars and Ghilzais consider the Lowanas as belonging to the Kakar *raj*, and that they also pay dues to the Jogizais, the Kakars seem to treat the country actually occupied by the Lowanas as belonging to their different sections more than to the Lowanas. On making enquiries marching down the Kundar during the late expedition, I was informed more than once that such and such a portion of country belonged to the Abdullazais, that another belonged to the Mando Khels, notwithstanding that these very tracts were occupied by the Lowanas, and acknowledged to be also Lowana country.

Under these circumstances, I trust it is not contemplated to consider this Lowana country outside Kakar limits. If so, I think a great injustice will be done the Kakars, and they will have just reason to complain. Indeed, the Abdullazai Kakars consider that they have a

right to the Tirwah at present occupied by the Taraki Ghilzais. Umar Khan, the old Abdullazai chief assured me that it is only within the last twenty or thirty years that the Tarakis came to Tirwah and commenced to cultivate, and that the Abdullazais, resenting their grazing grounds being brought under cultivation, fought with them about it. They are now good friends though, and the Abdullazais take their flocks every year to Tirwah to graze in the hot weather. Whatever may be the original rights of the Abdullazai claims, I think accomplished facts should be accepted, and the Tarakis being in cultivating possession of northern Tirwah, this country should certainly be considered as belonging to the Amir, whenever he chooses to take possession of it. I may here remark that it is not correct that the Amir's troops visited Tirwah this or any other year; but I consider it very probable that they may do so next year, and, if so, a certain number of the inhabitants, some of whom are refugees, are sure to bolt.

The frontier line should, I think, be drawn at the present boundary between these Tarakis and the Lowanas which I believe is well defined. On the west of the Lowana country up to, and I believe north of the latitude of Tirwah, the Kakar country extends between the Lowanas and the southern Ghilzais, while the Kundil river forms the boundary on the east.

Appendix C.

Proclamation issued to the Khiddarzai headmen by the Chief Political Officer on the 28th October 1890.

The Government of India having sanctioned a settlement of all the cases against the Khiddarzai section of the Sherani tribe, I have come to Apozai with the purpose of effecting a fair and just settlement. All the rest of the Sheranis have already submitted to the British Government, and have been taken into its service, and you cannot be allowed to remain rebellious any longer. On receipt of this letter you, Malik Murtaza Khan and Sheran, and all other Khiddarzai *maliks*, should come at once and join my camp. The cases against your sections will then be taken up and settled by tribal *jirgas* in accordance with the custom of the country. For the offences which the tribe have committed against the British Government, a general settlement will be come to after a due consideration of the offences committed, and of the circumstances of the tribe. You will have to give approved hostages for your future good conduct. The whole of the Sherani country will be visited and explored and roads will be made where they are necessary. I send a copy of this proclamation through the Commissioner of the Derajat and the original by the hands of Umak Khan, Hassan Khan, Kakar Khan, Bargha Sheranis. I do this in order that no mistake or misconception may remain in your minds as to who is addressing you Murtaza Khan and you Sheran Khan and the rest of you Khiddarzai *maliks*. It is the great and powerful British Government that sends this notice. The Government is determined that the old king's highways, *viz.*, Chuhar Khel and Zao *kafila* routes which lead from this country to British India shall no longer be kept closed by your rebellious behaviour to the great and lasting injury of trade and the general public.

If, therefore, you do not at once on receipt of this come into my camp and submit to the terms offered you above, I shall direct the Government troops to proceed against you from Apozai and Dera Ismail Khan, and the result, which you will have brought upon yourselves, will soon be known to the whole world.

Appendix D.

Return of strength of the Zhob Field Force, 30th October 1890.

Corps.	BRITISH TROOPS.		NATIVE TROOPS.		Horses, exclusive of officers' chargers.	Guns.	Equipment.	Mules.	REMARKS.
	Officers.	Non-commissioned officers and men.	Officers.	Native officers, non-commissioned officers and men.					
Staff	15	...	...	...	...	...	...	...
No. 7 Mountain Battery, Royal Artillery	5	82	...	145	6	6	7-pr. 2.5" R. M. L.	136	
King's Own Yorkshire Light Infantry	13	519	...	...	...	...	...	...
Durham Light Infantry	...	8	...	...	...	...	...	...
18th Bengal Lancers	...	...	6	273	273	...	...	...
No. 1 Company, Bombay Sappers and Miners	...	2	4	167	...	...	...	...
2nd Baluch Battalion	...	...	5	565	...	...	...	...
3rd " "	...	...	10	585	...	...	...	...
<i>Punjab Frontier Troops.</i>									
1st Punjab Cavalry	...	...	2	69	70	...	...	...
3rd " "	...	...	2	110	123	...	...	...
No. 1 (Kohat) Mountain Battery	...	...	3	142	3	4	7-pr. 2.5" R. M. L.	156	
No. 7 (Bengal) " "	...	...	1	72	1	2	Do.	67	
1st Sikh Infantry	...	...	5	340	...	...	...	...
2nd " "	...	...	5	432	...	...	...	...
2nd Punjab Infantry	...	...	5	398	...	...	...	...
TOTAL	33	611	47	3,298	476	12	...	359	

Appendix E.

*Notes on a tour of exploration through the Sultanzai and Hassan Khel Sherani countries
by Mr. L. W. King, C. S.*

16th November 1890.—I left Drazand at daybreak for Raghasar with an escort of 290 rifles, 1st Sikh Infantry, 40 sabres, 3rd Punjab Cavalry, and two guns, No. 7 Bengal Mountain Battery accompanied by Colonel Ross, commanding Drazand column, Captain Allen, Brigade-Major, and six other officers. The camp at Drazand, I may mention, was situated on an elevated plateau (called "Beli Gar Daggar") overlooking the Drazand Zam, and distant about three miles from the Drazand pass and $1\frac{1}{2}$ miles from the village. There was a plentiful supply of good water in a ravine close to camp. The ascent to the plateau from the *nala* is steep but passable for camels. There is very little wood in the vicinity, and it had to be procured from a distance through Nasar agency, as the village stock was quickly exhausted. Abundance of *makui* fodder for horses and mules, but very little grass in the neighbourhood. Health of troops while here was excellent. The Raghasar road, which for some distance is a fairly good one, passes along a plateau skirting the Drazand village and then turns in a westerly direction along the side of the Drazand *nala*. Descent to the bed easy at a distance of about half a mile from village. Thence along the bed to a narrow *tangi* between Zor Shahr and the *ziarat* of Pirghundi (about 300 yards across). Here the Sussa *nala* from Raghasar meets the "Gat" which flows from the Gat pass near Murgha, both together forming the Drazand Zam. Near Zor Shahr I observed a *baobab* tree to which a curious legend is attached. A *fakir* is said to have in some way or other offended the holy man in charge of the above-mentioned shrine who changed him into a tree, in corroboration of which my informant pointed to the red juice that exuded from it when scraped with a stone. The presence of this tree which is not indigenous would seem to indicate a Mogal encampment in the vicinity at some not very remote period, as in Central India I have often observed *baobab* trees in places where Jehangir is known to have encamped. Our road now lay along the bed of the Sussa *nala* in a south-westerly direction for about a mile. A gentle ascent then brought us on to a narrow plateau flanked on the left by a low range of hills and overlooking the *nala* on the right. The path which had all along been rough and stony runs along this plateau to about half a mile beyond the village of Girdghun which is passed on the left. The village is commanded by a curious foot-shaped hill which can be seen from a long distance. On the opposite side of the Sussa *nala* were observed the villages of Khaisara, Maidan and Karam Mirzai. The two former are substantial villages situated in separate ravines running into the *nala* and about two miles distant. Khaisara is inhabited by a colony of *Saiads*, and Maidan is celebrated as being the abiding place of the men who opposed our advance in the Drazand pass. Karam Mirzai is a small hamlet situated between these two villages close to the *nala* and on its left bank. There are two descents into the Sussa *nala*,—one about a mile on this side of Girdghun (this being the better route for camels), and another (the shorter of the two) about half a mile beyond that village. Camels can also proceed along the bed of the *nala* the whole way. The descent to the *nala* is rugged, but easy for mules, the slope being gradual. Our path then lay along the bed of the *nala* for $1\frac{1}{2}$ miles to the village of Raghasar, which is situated on a cliff overlooking the right bank of *nala* which about a mile from Raghasar makes a right-angled bend in a westerly direction. The village is not visible till one gets close to it, as it is hidden by a projecting spur. Raghasar is a large village and the capital of the Sultanzai section. A small outlying hamlet is situated on the left bank close to the bed of the *nala* with some maize cultivation in terraced fields strongly built up with stout stone walls, and here our camp was pitched close to a running stream. About a mile beyond a *tangi* or pass opens into the fertile Sultanzai valley immediately under the Takht range; distance from Drazand camp about 11 miles. Mulla Salim, Bara Khan, Hamim and other less known Sultanzai *matiks* came out to meet me and did excellent service during our short stay in their country. I had sent the surveyor (whom Colonel Holdich, R.E., had kindly placed at my disposal) on ahead with a small escort, and he arrived in camp in the evening, having made several important additions to his map. In the evening a man was brought down from the village for medical treatment whose foot had recently been cut off for suspicion of adultery, the usual punishment. This is a most brutal operation generally performed with a blunt knife, the bleeding stump being then plunged in boiling oil to stanch the blood. The heel is left, so that the man can walk in a shuffling sort of way.

17th November.—The sky overcast this morning. Heavy clouds veiled the summit of the Takht, and there had been a considerable fall of snow to half-way down the range. I was sorry not to have been able to make the ascent of the Takht, but the journey would have taken at least three days, which I could not spare. I started about noon with a few Sheranis to ascend a range of hills (the "Sultanzai Tizha") overlooking our camp and between it and the Sultanzai valley. The path lay for half a mile along the head of the Sussa *nala* and then wound up a spur of the Sultanzai Tizha range. The first part of ascent fairly easy, though extremely rough. The last half mile was very steep and difficult. The view from the summit was magnificent and fully repaid our exertions. The whole Sultanzai country lay at our feet, there being a sheer drop of some 2,000 feet to the bottom of the cliff. I was able to see all the Sultanzai villages except Zindawar, which was hidden by a small ridge that intervened between my position and the main range. This was the best view I have had of the Takht, and the purple haze over the lower part of the range with

the freshly fallen snow and rolling mist above enhanced the rugged beauty of the scene. The scramble down was even more difficult than the ascent, but we succeeded in reaching camp before dark. Distance about eight miles.

18th November.—18 miles.—I left at daybreak for Murgha with 60 rifles, accompanied by Colonel Ross, Captains Allen and Dobbin, and Surgeon Fooks. I had sent the surveyor round through the Sultanzai valley with 20 men with orders to meet us at Baspa. The main body with the baggage proceeded by the straight road (excellent for camels) along the bed of the *nala* and past Pirghundi and Matawar to Murgha. Fairly easy though rugged ascent for $2\frac{1}{2}$ miles to top of an extensive ravine whence excellent view was obtained of the country to east, south and north, including even the Indus, which was plainly discernable. We passed along the head of the ravine by an excellent path (passable for mules) up to Nishpazai, a distance of about half a mile. No water obtainable *en route*, and the Nishpazai villagers are obliged to go a long way down the ravine for it. This village has a mixed population, *i.e.*, of the 22 families, 16 are Muhammadzais and 6 Sultanzais. There is a good deal of cultivation here and at Maidan, which is situated further down in the same ravine about three-quarters of a mile off. I noticed here a quantity of manure which is extensively used in most of the Sherani villages. It is a mixture of sheep's dung and earth, and is carefully prepared. They carry it from place to place in sacks laden on bullocks, and it fetches a high price in the hills. The following were a few of the trees and shrubs noticed in the vicinity:—"Gurgura," (*Reptonia buxifolia*), "Pilosa," (*Acacia modesta*), Olive (*Olea Europæa*), "Kazhawana" (a low bushlike box-wood), "Pastuwanna" (*Grewia oppositifolia*), "Spalgwajha" (a low tree with small round seeds which the natives eat). I observed a tank for water a little below the village, but it was dry.

Nishpazai seems a flourishing village as does Maidan. People give five seers per house per harvest to the titular chief, Fattah Khan of Drazand, which is a curious fact, as it shows that this man has influence if he chose to use it. A new tower has lately been built in the Muhammadzai portion of the village. On a hillock overlooking the village is a cemetery with several curious T-shaped wooden monuments with pendent tassels, the mark in these hills of the resting place of some *mulla*, martyr or other notable. Our path now lay up a spur of the main range and on to a small plateau, from which a fine view of the Takht was obtained. Huge boulders lay dotted here and there over this plateau. About six miles from Raghasar we reached some cultivation of the little hamlet of Illias Khezai, which is about quarter mile to the left (said to be now nearly deserted, but to be occupied by the Drazand people in the hot season). A low ridge separates this village from the main range. Half a mile further on a few houses are passed, which form the summer residence of Bahar Shah, the chief of the Khaisara *Saiads*. These are situated on the edge of a large ravine, in the middle of which the flourishing *Saiad* village of Khaisara is situated about a mile distant. The descent is very steep, but passable for mules, except in one place, which could be put right in a short time. Abundance of water and trees, ferns, vines, &c. Halted near a cemetery surrounded by trees and containing the shrines of the two founders of the village. I was met by the principal *Saiads* at the entrance of the village, who made their usual offering of sheep.

After a short halt at Khaisara (which, by-the-way, means in Pushto a scanty supply of water) we pushed on towards Baspa. Ascent easy up the left of the ravine. About three-quarters of a mile from the village we came to a level place called Maulvi Shpavan (or the *mulla's* olive) and three-quarters of a mile further on Nishpa was reached. There are some fields here which are cultivated during years of good rainfall. Several village names occur very frequently in these hills, notably Nishpa, Landai, Baspa, Raghasar, Murgha and Karam. They all refer to some peculiar physical characteristic, for instance—

Nishpa ...	... A mountain hollow where rain water collects and cannot run out.
Landai ...	... Cultivable ground lying between two hill torrents.
Baspa ...	... A mountain spur which is occupied as a residence in the summer.
Raghasar ...	... A large extent of bare stony ground on a height generally overlooking a stream.
Murgha ...	... A cliff over a hill stream.
Karam ...	... A small <i>raghasar</i> about 10 <i>ghumaos</i> in extent.

About half a mile further on the village of Baspa is reached, if village it can be called, being only a summer resort of the Hassan Khels. Steep ascent up to the plateau on which the village stands, impassable at present for mule carriage. Village beautifully situated and air here quite cool and refreshing. There are a few grass huts still standing, but only one *pakka* house. People are said to live mostly in the open air, each family under his own "gurgura" tree.

About quarter of a mile above the village is a high rock from which there is a magnificent view of the Miani village of Tizrai and the whole Hassan Khel valley. There is water in the ravine below that runs down from the main range. Altitude about 5,000 feet. From this point to Punga is about half a mile. This is a level piece of ground with a tank now

almost dried up. A capital path runs along the side of ravine for another half mile to a level plateau called "Tsilat," another summer resort of the Hassan Khels. Easy descent with high sheer cliffs on the left for $3\frac{1}{2}$ miles to cattle sheds on the Tizrai *nala*, where I met the surveyor. He had finished the work assigned to him and had come out as directed on the main path at Baspa. A sepoy belonging to his guard was missing, but had returned to camp by another route, as we ascertained subsequently. The Tizrai *nala* flows north and east and then joins the Gat stream near Murgha. Tizrai is a flourishing Miani* village situated at the base of the cliffs just referred to. The pass just above the village leading into the Karam valley is described as difficult but practicable. There are a few houses on the edge of the *nala* to the south of the village called "Katsai." The Tizrai *nala* is twice crossed, the ascent to the plateau beyond being in the last case very steep. A small ravine is then passed when another plateau is reached. This was followed for some distance to a *nala* which presents no difficulties, and at last the plateau is reached on which Murgha stands, some three miles from Tizrai. Easy descent to cultivated field close to bed of Gat *nala*, where our camp was pitched. Large ruined village on the *nala* on this side of village said to be the ancient site of Murgha. This part is very bare of trees and bushes. The path is very rough and stony, but easy for horses and mules.

19th November.—Palak Khan's son, Zafar Khan,† arrived this morning. This limb of Satan had so far frustrated all my efforts to get him in. I sent the surveyor at daybreak with a guard of 20 men to survey the country in the vicinity of the Gat pass beyond the outer range that bounds the Hassan Khel valley, *i.e.*, into the Karam ravine.

I started in the afternoon with a few Hassan Khels to ascend a range on the opposite or left side of the Gat *nala*. After crossing the bed of the stream and ascending the cliff our path lay along a stony plateau, then crossed a small ravine, and wound up the range. Ascent very rough but fairly easy. Curious red clay cliffs here, which can be seen at a long distance. Paused some time on the top of the ridge to watch a flock of *urial* feeding; then went along edge of the cliff for half mile and ascended the highest peak of the range (Spins Kar) about 1,000 feet above the plain. By this time the sun had set and from my "coign of vantage" I had a magnificent view of the surrounding country, to the north-west the Hassan Khel valley, and to the south-east Drazand, where the camp was plainly discernible. The hills here are very bare of bushes. A ravine was pointed out to me which separates the Uba Khel from Hassan Khel country. No village in this part of the country, though here and there bare grass-covered patches suitable for cultivation could be observed. All this tract has not been properly mapped, and I shall send the surveyor here to-morrow to make a survey of it. Steep descent to *nala* bed and then along the *kach* to camp, which I did not reach till after dark.

20th November.—The Sherani *jirgas* arrived this morning under charge of Lieutenant McMahon and the *Tahsildar* of Kulachi. I was busy all day in making arrangements for the payment of fines imposed on the tribe. Surveyor with small escort ascended the hill that I climbed yesterday and mapped all the surrounding country. Remained in camp all day.

21st November.—The surveyor was ill with fever, so I did not send him anywhere to-day. After breakfast I made an excursion to the Gat pass with a small escort of 50 rifles and 15 sabres accompanied by Captains Allen, Barratt and Baker. Lieutenant McMahon, Assistant Political Agent, Zhob, also accompanied us. We followed an easy but rough path up the cliff to a stony bare plateau on which Murgha is situated, along which we proceeded for about two miles; then descended into the bed of the Gat *nala* close to the village of Nighezha, which is situated on a cliff overlooking the *nala*. Below is the hamlet of Shina Powa which boasts of a flour-mill. After proceeding for a mile along the bed of the *nala* (which is very wide here) arrived at the Gat *tangi*, a very narrow gorge about thirty yards across with steep precipitous cliffs on each side.

The Gat stream which abounds in fish runs through the middle of it. The narrow portion extends for about 500 yards. I left the cavalry here, as it would have been almost impossible to take the horses over a rock that blocks the path in the middle of the pass. The pass opens out into a valley about 200 to 700 yards across. Just here in a ravine to the right is situated the Hassan Khel village of Karkan Mela. It is not visible from the path, but can be seen by climbing a short distance up the opposite side of the ravine. The path then passes through some cultivation in terraced fields and winds in a zigzag direction along the bed of the stream which is crossed and re-crossed many times until the Gat pass proper is reached. Shortly before this a ravine is seen stretching up to the left, commanded by a steep hill called "Tsilat," under which is situated the Miani village of Karam, and further on Gauri Karam. This little Miani valley is situated between the two ranges named Tizrai Tizha and Sapreza. The pass proper is about two miles distant from the *tangi*. At the mouth of it to the left I observed a sulphur spring issuing from the base of the cliff and falling into the main stream, the water of which is lukewarm and strongly impregnated with sulphur. The Sheranis who accompanied me informed me that in winter the water of this

* These Mianis are also landed proprietors in the Tank *ilaka* (Gomal). They are brethren of the Mianis of the Gomal valley and Kashmir Kar, and, like the Sheranis, belong to the old Mirani *tuman*.—R. I. B.

† This youth has done much mischief in the tribe, and will require to be closely looked after.—R. I. B.

spring is warm, whereas in summer it is quite cool! On the top of a high cliff above this spring a *fakir* had his abode till his death, which took place recently. I went up the Gat pass for about quarter of a mile, but it was unpleasant walking, as the stream was almost knee-deep in places, and I was obliged to wade through it almost the whole time. The path after winding for a short distance in a westerly direction turns sharp to the south, and the view is here bounded by a high peak called Sapreza. The path is said to wind round this and then turn again to the west. It is said to take a man nine hours to get through it, and in places the passage is so difficult as to require two men, one to assist the other! I have satisfied myself that a road through this pass would be impracticable, save at a prohibitive cost; but if the sappers would have a look at it as they pass up the Hassan Khel valley and give a professional opinion it would be more satisfactory. After a short halt we returned to the *tangi*, where we picked up our horses and proceeded thence by another route to camp, *i.e.*, along the bed of the Gat *nala*, which runs due east for about two miles to opposite the village of Lomai (situated on a cliff overlooking the stream) and then takes a sudden bend in a southerly direction to the camp, about a mile further on, where the *nala* becomes very wide, with steep cliffs of conglomerate on the right bank. On the way I met some Mianis who were sorely troubled because their villages of Tizrai, Karam and Gauri Karam had been included in the general fine imposed on the Hassan Khels. I informed them that as their villages were situated in the middle of the Hassan Khel country, and they were practically Hassan Khels, no remission could be made in their favour. Passed another flour-mill near the camp, to reach which we were obliged to cross a number of terraced fields. The *kachi* of the village of Murgha is extensive, and the soil of the first quality. I noticed a couple of palm trees here, though the altitude is nearly 3,000 feet. We passed a curious old *karez* running along the side of the conglomerate cliffs to the right of the *nala*. I may mention that a small demonstration had to be carried out in the Hassan Khel village of Karkan Mela and a show made of seizing their cattle before the villagers could be induced to pay up their share of the fine.

22nd November.—I was engaged all day in disposing of *jirga* cases and other urgent work, so was not able to go out. I sent the surveyor with a guard of 30 men to Khalilzai to survey the country as far as the Zao pass. He has orders to return to this camp on the 24th instant. The whole of the Hassan Khel country will by that time have been surveyed, and he will then be at liberty to leave for head-quarters.

23rd November.—Cloudy to-day, with slight rain at intervals. The 3rd Baluch Battalion and detachment of sappers marched in this morning. I was busy all day, so was not able to make any excursions. A large portion of the fine was paid in to-day. The last of my *jirga* cases settled. An auction of cattle captured in the Khiddarwai country took place to-day. There was no sale for cows and bullocks, which were withdrawn and will be sent to Draband for sale.

24th November.—Dark cloudy day, with a good deal of rain. Colonel Nicolson, Lieutenant McMahon and Lieutenant Atkinson, with a party of sappers, started early this morning for the Gat pass. They penetrated the pass to a distance of six miles, or two-thirds of the total distance, and found the passage extremely difficult. My opinion as to the impracticability of the pass as a possible route is thus confirmed. I did not go anywhere to-day, having plenty to do, and the weather being most inclement. The fine imposed on the Uba Khel and Hassan Khel was realized in full to-day. About Rs. 1,500 of this was paid in old Sikh rupees ("mirabi," as they are called here), and I had some little difficulty in estimating their value, but fixed 14 annas at a venture, which I subsequently ascertained was correct.

25th November.—Colonel Nicolson with the 3rd Baluchis and sappers marched this morning for Sur Kach. I sent Rab Nawaz with the column as political officer. Colonel Nicolson left behind a company of his regiment with a native officer as an escort for me on my journey to the Zao. The morning was bright and rain held off till the afternoon. I made an excursion to Tizrai and climbed the steep cliff above the village which divides the Hassan Khels from the Karam valley. After getting on the Murgha plateau I descended into and crossed a dry *nala* and then followed a rough stony path across a plateau intersected by three *nalas*, and, leaving a low ridge on the right, entered the village of Tizrai (about two miles distance). This is a good-sized place, with extensive cultivation. Ruins of a much larger village are noticeable near the present site. A spring of clear water gushes out of the base of the cliff above the village and runs into the ravine below. A good many "lasora" trees about. We had brought our horses as far as Tizrai, but the road was too rough to use them. I left the greater part of my infantry escort here and started on my expedition up the hill with four sepoy and a few Sheranis. Our path lay due south for about a mile—an easy, but rugged, ascent. Then began the real ascent up a steep cliff like a slab of marble at an angle of about 60°, a very difficult climb; height about 1,600 feet. View of the Karam valley obtained from the summit, but the village was hidden from view by a low hill to the left. It began to rain heavily as I descended, which made the rocks slippery and the descent no easy matter. I managed after several spills to scramble down just as it was getting dark, but we did not get back to camp till 7-30 p.m. The surveyor returned this evening, having finished his survey of the Hassan Khel country in a most satisfactory manner. He made his way to Khalilzai *via* Karkan Mela and Tangi Sar and thence to the Zao and back by Sur Kach. The Chuhar Khel fine has not been paid in yet, and I shall not therefore be able to move forward to-morrow as I had intended.

26th November.—It rained heavily during most of the night and all day. Our camp has been reduced to a state of quagmire and the tents are soaking wet. We could not move out of our tents all day. The Chuhar Khel fine has not been paid in yet. I put the Chuhar Khel *maliks* that are here (including Pur Dil) in the lock-up. No sign of clearing, and I fear I shall have to postpone my departure for a day or two.

27th November.—It has been raining very heavily all day. I was not able to stir out of my tent in consequence. The rain stopped at night and the sky cleared.

28th November.—Fine sunny day. Received intelligence early this morning of a sad accident in the Zao pass, where the 3rd Baluchis are encamped. A landslip occurred, burying 20 men, of whom only two were taken out, one dead, and the other in a dying state. Lieutenant McMahon left at noon to-day for the Baluchis camp at Gandari Kach. I accompanied him as far as Wazir Kot, $2\frac{1}{2}$ miles distance. This is a large village of some 60 houses and is the residence of the Hassan Khel chief, Palak Khan. I took with me only a small tribal escort, and was accompanied by Palak Khan. The path lay along the bed of the Gat *nala* for about a mile and a half, and then near Lomai branched off into a small ravine to the north-east, at the top of which is situated the village. At the mouth of this ravine on a cliff composed of reddish clay (hence the name of "Sur lakai" = red spur) is a large cemetery. Path very rough, but easy. Beautiful view of the Takht and the whole Suliman range from the top of the ascent. The Zao appeared a comparatively short distance off—an effect probably produced by the clearness of the atmosphere after rain. Returned to camp by the same route. I sent surveyor back to Dera to-day *via* Draband, as his work is finished. The Chuhar Khels have not yet come in with their fine.

29th November.—9 miles.—The rations for the troops having run out, orders were issued last night for the return to Drazand this morning. Colonel Ross, with the detachment under his command, left at noon, some 80 men of the 3rd Baluchis being left behind as my escort. The Chuhar Khels came in with the fine just before Colonel Ross started. It took some time to realize the amount in full, and it was not till 1-30 P.M. that I was able to shake the mud of Murgha off my feet! In the end a sum of Rs. 50 remained due, which no persuasion could extract from them. I determined to resort to more drastic measures, and on searching the deputation found the missing Rs. 50 concealed on one of them. Two stolen bullocks were also given up and two prisoners surrendered. The *jirga* were then dismissed to their homes. Khashu came with the deputation to make his *salam*. This redoubted *malik* is paralysed in one arm and has a cataract in both eyes; and is altogether a most miserable looking specimen of the genus Sherani!

I did not get yesterday's dak till noon to-day. The Luni torrent had come down and cut off all communication with Dera for some time. The Murgha people on my leaving put in a claim for compensation on the score that their lands had been injured by being trampled on by mules, camels, &c.!! I informed them that, on the contrary, not only had they themselves benefited by our presence owing to the money we brought into the village, but that even their lands would be improved by the manure left thereon by the camp cattle! I left at 1-30 P.M. for Sur Kach, having sent on the baggage an hour before. I had intended going by Karkan Mela, Tangi Sar and Khalilzai, but was dissuaded by the *maliks*, who insisted that this road was impassable for horses, and that if I walked it I should not get into camp till very late. Not caring to risk this, and knowing that the surveyor had gone by this road and mapped all this part of the country, I changed my mind and took the straight road *via* Lomai. The path for a mile and a half lay over the bed of the Gat stream, and was very rough riding. At Lomai the cliff overhanging the *nala* was ascended, which brought us on to a level stony plateau intersected by a couple of small ravines. Passed the summer residence of the Lomai people, Manazai, which is now deserted. Along this plateau we proceeded for about five miles, when a narrow neck of land between two *nalas* was reached. Steep but easy descent into the bed of the Surkhodzai *nala* (usually dry), so called from the red earth, which abounds here, along which our path lay to its junction with the Khalilzai torrent (a distance of $2\frac{1}{2}$ to 3 miles). Path along this very easy. This was our camping place, Sur Kach, a small level space of ground, surrounded on all sides by bare low hills. No cultivation, though there seems to be a perennial supply of water. Good deal of *kana* grass along the sides of stream. There is no village nearer than Khalilzai some five miles off. I got in at 4 P.M., and about an hour and a half afterwards the baggage arrived. My camp was pitched in the angle between the two *nalas* Surkhodzai and Khalilzai. The tents were hardly up when a terrific thunderstorm (which had been gathering for some time) burst on us. I have rarely seen such heavy rain even during the rains. In ten minutes my tent was flooded, and I was obliged to take refuge on my bed! The storm, however, did not last more than an hour, but some of the supplies for my camp were, I am sorry to say, damaged. All this portion of the Sherani country, though fertile and supplied with abundant water, is destitute of inhabitants owing to Waziri raids. About five years ago they killed four Sheranis in this very place, and very recently they carried off a large flock of goats from the same neighbourhood. This tract, in fact, though *de jure* belonging to the Hassan Khels, may more properly be described as "no man's land." *

* As the Waziris settle down the Sheranis will again inhabit and cultivate these lands. The new post at Kashmir Kar will be a great protection to them.—R. I. B.

30th November.—Early this morning rain was still falling, and I was afraid I should not be able to proceed on my journey, but as it got finer later on I determined to make a start. We got off at 8-45 A.M. The Khalilzai torrent was much fuller than last night, but there was no difficulty in crossing it. Our road lay along the bed of the stream (with low bare hills of red and purple earth on each side) in a northerly direction for about two miles where it joins the Sawan *nala*. This tract is called "Char Wash Kai" (grazing grass), and is the regular halting place on the Zarkanni-Zao road. There is a good deal of grass on it and some trees. Very easy-going for $1\frac{1}{2}$ miles up the Zao *nala* (which also joins the Sawan near its point of junction with the Khalilzai *nala*) up to a plateau on its left bank, called Phal Ragah. Here the Zao takes a bend to the west and widens out considerably, with low broken hills on the left and straight steep conglomerate cliffs on the right (the opposite order is seen at Raghasar, Karam Hezai and other places). The amount of water in this stream is said to be very limited, and even after the late heavy rains the supply was scanty. The path lay along the stony bed of the stream in a westerly direction for some four miles and then turned to the north for half a mile to Gandari Kach, our camping place, which is not visible till you come on to it. Gandari Kach means "the valley of oleanders," but I saw very few of these shrubs here. The rain luckily held off till my camels got in but came down in torrents before my tents could be pitched. I found the 3rd Baluchis and Lieutenant McMahon still here. They had intended moving up the Zao to-day, but last night's rain destroyed most of the work done by the sappers in the pass and it will all have to be commenced *de novo*. It is said to be impossible to blow up the Siri rock as it is nearly 30 feet high and very hard. Parts have been blasted away and the road-way made wider. A ramp up the rock had also been made, but this has been washed away. It would seem an impossibility to make a permanent road up this pass. The sappers are working there to-day, though it must be very dangerous owing to falling rocks and landslips. I saw the place to-day where the accident occurred. Nine bodies have been recovered but ten still lie buried under the fallen cliff. The rescued man is still alive, but there is little hope of his recovery. The rain stopped at 2-30 P.M. but it still looks threatening. The camp has been pitched at the mouth of the pass on a confined space, with clay and conglomerate cliffs all round. Abundance of water, grass and wood. There is no village nearer than Khalilzai.

Colonel Nicolson and Lieutenant McMahon walked to Kashmir Kar and back yesterday, and report the road practicable for bullocks (except at one place, which will have to be ramped), but not for laden camels. Colonel Nicolson has kindly promised to make the road as practicable as time will permit. He is anxious to push on to Kamal Kulia to-morrow so I must make an effort to reach Kashmir Kar with my camels. All surplus camels, stores, &c., will be sent to Zarkanni to-morrow down the Zao pass.

Appendix F.

Report on the Zao and Gat routes in the Sherani country through the Suliman range.

1.—THE ZAO DEFILE.

GENERAL DESCRIPTION.

The Zao defile is entered from the east at Gandari Kach. Like the Chuhar Khel Dhana and Gat, it consists of a narrow gorge through the Suliman range cut by the action of water escaping through it from the higher grounds to the west of that range. A stream of water flows through it which is liable to sudden and heavy floods after rain. At about $2\frac{1}{2}$ miles from Gandari Kach the gorge, which up to that, is extremely narrow, being in places no more than 15 feet wide, opens out, and is joined by a ravine coming in on the north from the direction of Kashmir Kar. A few yards further on the Zao defile again narrows and the passage is blocked by the Siri rock, about 3 miles from Gandari Kach. This is a limestone boulder some 25 feet high with two smaller boulders resting against it, over which there is a waterfall of some 20 feet in height. The passage, a few yards below this boulder, is only 10 feet wide. The defile again widens out and again narrows at $3\frac{1}{2}$ miles from Gandari Kach where two small waterfalls of about 5 feet high obstruct the road. From here onwards the gorge widens out and the route presents no difficulty. It will be seen from the above description that for about $3\frac{1}{2}$ miles only the Zao defile presents difficulties and labour is required to make the road passable for camels.

The Sappers and Miners under Lieutenant Atkinson, R.E., and the 3rd Baluchis under Colonel Nicolson were able notwithstanding bad weather to make a good road through the defile in four days. Wherever possible the road was made in the manner most likely to promise permanency. For the first $\frac{3}{4}$ mile from Gandari Kach the difficulties of the defile were avoided by a well-made permanent path over a low shoulder of the hill above the camp which descended to the river on the left bank by means of a zigzag descent. About 400 yards further on, *i.e.*, one mile from Gandari Kach a large portion was blasted from a large boulder "the Boar's head," and a ramp which bids fair to remain permanent was built up to the top. Immediately beyond this, a long narrow path was blasted for about 40 yards on the surface of a long slippery black rock, thus making a permanent pathway for camels. For the next 2 miles, *i.e.*, to the Siri rock the path, now made, meanders between large massive boulders and has been taken by ramps as much as possible beyond the reach of ordinary floods. All tight places were blasted to admit of the free passage of laden camels. At one place some difficulty was met with where a collection of large boulders across the gorge had raised the river-bed 12 feet. Here the course of the stream was diverted, and a solid ramp was constructed.

The Siri rock presented much difficulty. The former *kafila* route was up a small ramp to one side where the passage was so narrow between the rock and the side of the channel, that laden camels could not pass. A solid ramp of huge stones has been constructed here and a large portion of the rock, to admit of the easy passage of laden camels, was blasted. The rock is of hard white limestone and the portion blasted necessitated no less than 17 blasts. The removal of the whole rock under the circumstances was impossible. Its removal moreover would be of no use. The drop here of 20 feet in the river-bed would remain and the narrow gorge which is only 10 feet wide would soon be blocked up by fresh boulders in heavy floods.

The ramp now made for the same reasons can never be a permanent one. Owing to the angle at which the water rushes through the channel in flood time, and to a waterfall from above which comes into existence after heavy rain, the foot of the ramp gets scoured away and the upper portion falls. We had practical experience of this on the 29th November. A ramp of massive stones had been constructed which appeared substantial enough to defy any ordinary flood. A few hours' flood that night removed not only the ramp but every trace of the boulders composing it. The blasting away of the portion of the top, however, will, in future, allow laden camels to pass, and the ramp up to the required height can always be constructed when required.

At about 600 yards beyond (about $3\frac{1}{2}$ miles from Gandari Kach) at the waterfalls above referred to, a pathway was blasted through the rock and ramps were built up to it out of the reach of ordinary floods.

CONCLUDING REMARKS.

The construction of a road through this defile would be necessarily limited to the improvement of the path along the stream bed. The cliffs above, in many places, overhang and masses of conglomerate rock look in places as if they were suspended in mid air on the sides of these cliffs. Any attempt to work the sides of the cliffs would in consequence be attended with much danger. Even during or after rain the defile has to be traversed with much caution. Masses of conglomerate, huge rocks and boulders are frequently precipitated from above. For the same reason the nature of the route through the defile is constantly liable to be materially changed. Boulders falling from above or being washed down in floods would create fresh obstacles from time to time. At present the route is an easy one, and the blastings made at numerous places, where they were required to give wider passage, will render the route an easy one for a considerable length of time. The ramps made are always liable to be carried away, and any force passing through should send on a party a day ahead to repair them. It is estimated that 150 men in six hours could execute the necessary repairs.

2.—THE GAT DEFILE.

GENERAL DESCRIPTION.

The route through the Suliman range through the Gat leaves Murgha (1,500 feet) over a stony plateau in a north-west direction for a mile where it strikes the Drazand or Gat stream. It here leads west along the stream through a range of hills parallel to the Suliman range. At three miles from Murgha this range is pierced by a narrow *tangi* about 100 yards in length. It is impassable for laden animals, but could in a short time be made fit for camels. On leaving this the stream turns due south near the village of Karkan Mela. Here the stream runs through a fairly wide valley and the route is an easy one for about 2 miles. Then here, *i.e.*, about 5 miles from Murgha, the river turns west and enters the Gat (1,920'). The stream runs through a narrow passage of hard rock varying from 15 to 40 yards in breadth with in most places a smooth gravel bed. Every here and there waterfalls of 6 and 10 feet in height over boulders are met with, which present difficulty. Near the mouth of the *tangi* in the south wall, is a warm sulphur spring and about one mile above on the north side a very large spring where a considerable volume of water dashes out of a hole about one foot in diameter and about 4 feet above the ground.

At about 8 miles the *tangi* narrows and then very difficult places were met with, where one had to scramble over huge boulders over which the water dashes into deep pools below. At other places one had to scramble over slippery sloping rocks on the south side. At about 8½ miles three huge rocks block the *tangi*, over which the water falls into a deep pool. These can only be crossed after a very slippery scramble on the north side. A little further on, a steep rocky *nala* enters from the south between the Takht-i-Suliman and Kaisarghar peaks, leading from Maidan. From here onwards the gorge becomes very difficult. The bed rises rapidly and boulders heaped on boulders are met with, until at 10 miles (2,400') from Murgha a pool of 10 feet in depth, extending across the entire width of the pass stops further advance except by swimming. This is a most picturesque spot. Springs of water dash out at a considerable height above the pool from the precipitous rocky side through thick masses of maiden hair and other ferns. (It is interesting to note that when we re-visited this pool, some eight days after, we found that a heavy flood had entirely filled it with massive boulders, thus completely altering the nature of the obstacle it afforded on our first visit.) On retracing our steps we found a track which leads up the cliff on the south side along a ledge overhanging the stream to a point about 170 feet above, and then descends into the gorge to the stream-bed. The route then again leaves the stream on the north side and after a rough climb of 100 yards brings one down again to the stream. From here the stream has cut its way through rifts of stratified rock, and the obstacles are difficult to overcome even by active men and a path could never be made suitable for transport of any sort. At almost 11 miles the whole hill side appears to have given way, rocks 20 to 30 feet square are piled up in the chasm and are difficult to climb. At one place the only means up is a notched hole after scaling which one has to pass through a subterraneous passage between boulders and then haul oneself up from rock to rock. At 11 miles the gorge narrows to 10 feet. After another mile of great difficulty the gorge at 12 miles opens out, runs half a mile west and then half a mile south, and reaches the camping ground of Mazrai Kach (2,900').

CONCLUDING REMARKS.

The Gat differs from the other gorges through the Suliman range, *i.e.*, the Zao or Chuhar Khel Dhana, in that for considerable distances the gorge has a smooth gravel bottom, and then instead of numerous small boulders round which in the other gorges a meandering pathway can generally be made, huge boulders block the entire passage and the precipitous sides make any attempt at diversion impracticable. The fall of the stream is much greater and a heavier volume of water flows through it. For upwards of 7 miles the gorge is a chasm through towering precipitous cliffs thousands of feet above. Cutting as it does through the Takht-i-Suliman and Kaisarghar ridges the scenery is naturally magnificent in the extreme. The construction of a pathway by this route, fit for any sort of transport animals, appears impossible.

Appendix G.

Translation of an agreement, dated 23rd March 1891, entered into by the Larghawal Sheranis.

We, the headmen of the Hassan Khel, Uba Khel and Chuhar Khel sections of the Sherani tribe, including the Sultanzai, Khiddarzai and Ismailzai sub-sections and the residents of Parwara, Drazand and Khamistana, having heard the orders of Government, unanimously accept the conditions detailed below, and agree that we will raise no objection to carrying them out.

1. Besides carrying out the agreement previously entered into by us the orders now announced will be complied with.

2. The three passes, Zao, Khiddarzai and Chuhar Khel Dhana, will be open to caravans and travellers for trade and other purposes, and the sections above-named will be responsible for any loss of life or property occurring in them. No tolls of any kind will be levied on these routes.

3. European and native officers and other public servants will be at liberty to travel in any part of the Sherani country, and the tribe will be responsible for the safety of their lives and property and for supplying them with such *badraggas* (escorts) as they may need. These escorts will only be entitled to receive diet expenses and will have no claim for further remuneration.

4. Arrangements for the suppression of crime and enforcing compliance with the orders of Government will be effected through the headmen of the tribe.

5. If the orders of Government are disobeyed, disregarded or ignored, the Government will be at liberty to occupy the Sherani country.

6. Twelve selected headmen of the tribe will be detained at Dera Ismail Khan as a pledge of the future good faith of the tribe during the pleasure of Government. Besides these men the Deputy Commissioner will have power at any time to keep any of the headmen of the Khiddarzais or any other section of the tribe as hostages at Dera Ismail Khan as long as Government may desire.

7. If a bad character belonging to any section commits an offence on a British subject in the Sherani country or in British territory, the sections concerned will be responsible for the apprehension and surrender of the offender. If that section fails in this the whole tribe will be responsible for the surrender of the culprits to Government, which may deal with him in any way it may deem expedient. If the tribe fails to surrender the offender, it shall be liable to pay the compensation and fine imposed by the Government after due consideration of the merits of the case. The Government shall also have the power to deduct the amount of compensation and fine from the tribal service emoluments.

8. In consideration of the duties and responsibilities referred to above the Government has granted a sum of Rs. 917 to the tribe in the shape of service allowances. These allowances have been given on the condition that posts will be built at the following places :—

- (1) Mogal Kot, near the Chuhar Khel Dhana.
- (2) Nishpa (Atal Khan Kabol), near the Khiddarzai Dhana.
- (3) Gandari Kach, near the Zao Dhana.
- (4) Drazand.
- (5) Domandi.

These posts will be held by tribal levies in receipt of service allowances, but the Government will have power to reinforce the garrisons at these posts by placing other levies there.

The levies will be generally footmen, but a few headmen shall also be appointed as sowars. The distribution of the service is as noted below :—

						Per mensem.
						Rs.
1	Jemadar	...	...	...	...	30
1	Duffadar	...	...	...	...	25
4	Havildars	...	...	...	...	60
8	Sowars	...	...	...	...	160
61	Footmen	...	...	...	...	610
	Allowances to <i>maliks</i>	...	...	...	...	32
TOTAL						917

The *silladari* deductions will be made at the following rates :—

						Per mensem.
						Rs.
Out of pay of a sowar	...	...	...	...	...	5
Do. footman	...	...	...	...	...	2
Do. havildar	...	...	...	...	...	3
Do. duffadar	...	...	...	...	...	5
Do. jemadar	...	...	...	...	...	7
						—
TOTAL						22
						—

9. Service shall be permanent, and once a nomination is made no change will be allowed without the consent of the Deputy Commissioner. In the case of negligence, disobedience and incompetency the Deputy Commissioner shall have power to dismiss, fine or transfer the individual in fault. Any alteration in the distribution of *silladari* will be subject to the orders of the Commissioner of the Division.

Appendix H.

A brief account of the principal customs prevailing amongst the Sheranis by Mr. L. W. King, C.S.

Birth.—The birth of a son is generally announced by the firing of guns. A few sheep are slaughtered and the meat distributed among the villagers in the mosque or village *chauk*.

The infant receives its name on the third day as a rule, and in exceptional cases on the seventh day. The child is named either by the eldest male member of the family or by some friend nominated by the father.

The "Bang" or formula of faith is not repeated in the child's ear as is the case with other Muhammadans.

The child is generally given a cap or turban to wear after he has completed his seventh year.

Circumcision is as a rule performed when the child is ten years old.

No rejoicings of any kind take place on the birth of a female child.

Betrothal.—On the child's attaining the age of puberty the father looks out for a suitable match for him. The father or legal guardian of the girl sought in marriage fixes the amount for which he is willing to bestow her hand, and if the parties agree, the contract is made. Should a difference arise, mutual friends are called in to use their good offices and bring about a settlement. Some Rs. 3 or Rs. 4 are generally paid as earnest-money, the balance being given afterwards. The marriage, however, cannot be celebrated until the whole amount is paid up. An exchange of girls is also sometimes effected, in which case no money is passed on either side. The Sheranis have a saying that by receiving money for their daughters they sell their flesh but not the bones, or in other words, that the husband is entitled to chastise his wife or inflict any bodily injury upon her, but is not at liberty to kill her. The amount paid for a girl varies a good deal, as will be seen from the following abstract:—

Sultanzai	...	Rs. 80 to Rs. 240
Other Uba Khels	...	Rs. 100 to Rs. 600
Hassan Khels	...	Rs. 200 to Rs. 700
Chuhar Khels	...	Rs. 100 to Rs. 400

In deciding the amount the personal attractions of the girl and the position and wealth of the parents are taken into consideration.

Marriage.—The marriage is not celebrated until the betrothed parties are fully grown up, or generally until the bridegroom is 20 and the bride 16 years of age. An exception to this rule is said to be unknown.

The relations and friends of the couple are invited to the wedding. Some of those that can afford it bring sheep and thus contribute their quota to the marriage feast. In return they are given a *lungi* or Rs. 3 or Rs. 4 in cash on leaving. The drum and *serangi* are the only instruments used on the occasion.

The women sit apart and sing songs, while the male guests perform the sword dance and the *jhumar* round a bonfire. The marriage expenditure is not excessive, not amounting to more than from Rs. 10 to Rs. 120, according to the position of the parties. It is curious to note that among the Hassan Khels the girl is given no voice in the marriage contract, though in other sections of the tribe she is nominally consulted and generally names the *mul*la as her representative.

Dowry.—Household utensils, clothes, and cattle to the value of from one-fourth to one-half of the amount received from the parents of the bridegroom are given as a dowry with the bride.

Haq Mahr.—This does not exist amongst the Sheranis. In rare cases, however, an agreement is made at the time of the marriage contract to the effect that one-fourth of the alms given to the poor by the husband shall be considered as the wife's gift.

Divorce.—In case the husband is dissatisfied with his wife's conduct, he sends for her father or guardian and informs him of his intention to divorce her. If the said father or guardian agrees to pay the amount fixed by the husband, then the latter consummates the divorce by flinging three clods of earth after her. The former then takes possession of her and is at liberty to re-marry her, receiving in the event of such re-marriage a sum of from Rs. 60 to Rs. 240 from the second husband. If husband and father-in-law are unable to come to terms regarding the sum to be paid to the former, an arbitrator is appointed, who fixes the amount. As a rule the amount thus fixed does not exceed one-half of the net sum (after deducting the value of the dowry) the parents had received for the girl's hand. The age and attractions of the women are of course taken into due consideration in estimating the amount. If the parent or guardian declines to take back the woman, the husband divorces her *pro forma* and drives her from his house. In such a case she is not allowed to live in the tribe and must go elsewhere. If after this any one marries her the former husband

or his representative as well as the parents of the woman are entitled to receive compensation from him. The former gets as much as he would have received from the parents if they had agreed to take possession of her, and the latter either a sum of Rs. 40 in cash or two bullocks or cows.

Widow marriage.—On the expiration of three months after her husband's death a Sherani woman is at liberty to re-marry with the consent of her husband's representative, who is entitled to a sum of from Rs. 60 to Rs. 300 on the celebration of the marriage. The parents are also bound to get Rs. 40 or two bullocks. If the widow marries a member of her late husband's family, his representative is entitled to a sum of from Rs. 80 to Rs. 100 by way of compensation. If this is not paid, the said representative can claim the amount paid on the marriage of any female child born of the second union, and in default of such a child being born the husband of the woman is bound to procure a wife for him or his heir as the case may be. The parents of the woman in this case are not entitled to anything.

Funeral ceremonies.—These are the same as are in vogue amongst Muhammadans generally, with a few unimportant exceptions :—

- (1) The Sheranis do not entertain persons who come to condole with them on the death of a relation.
- (2) Water is not sprinkled on tombs of the deceased during the *Muharram*.
- (3) No alms are given to the poor on the 7th or 40th day after death in the case of a woman or a child.
- (4) A post with a rudely-carved top to represent a turban is placed at the head of the tomb of a male (a general custom in Turkey), while over the tombs of a celebrated *mulla*, a martyr or a chief, a T-shaped pole with pendent tassels is set.

Inheritance.—On the death of the father, his sons are considered his legal heirs and divide his property equally amongst them. The eldest, however, is usually given a slightly larger share. In default of male issue, the brother, or nephew, or any direct descendent in the male line succeeds. In case of failure of any such direct heir, all the male members of the branch to which the deceased belonged divide the property equally between them. The female members of the family are not entitled to anything.

Right of refuge.—An offender who is unable to protect himself from his enemy, or in other words, when his own territory is too hot to hold him, generally takes refuge with a chief or other powerful personage belonging to some other section or tribe. The custom ("nahora" as it is called) is to take a sheep and slaughter it at the door of the person's house whose protection is claimed and who is bound to give him refuge. The offender then becomes the protector's *hamsaya* or neighbour, and is bound to make good to the latter any loss incurred by him in consequence of the responsibility he has undertaken. In the event of the *hamsaya's* death the protector's claim forms the first charge on the deceased's property. Another method of claiming protection consists in the offender tying the end of his *chadar* to that of the wife of some powerful personage when the latter generally affords him the succour he requires, though he is not bound to do so as in the former case. The custom of "nahora" is also employed when one man begs any great favour of another. The slaughtering of a sheep at a person's door marks the urgency of the case and is something akin to the Hindu custom of sitting "dharna."

Dress.—It is hardly necessary to describe in detail the dress of the Sheranis, which differs but little from that of other hill tribes. Village women of the lower classes generally wear only a shift and a *sari* made of *khaddar* cloth, which is imported from the Daman. Well-to-do women of course make a more elaborate toilet, wearing *pajamas*, a bodice and a *sari*. The *burka* or veil is not used at all. The women in most of the Sherani villages kept well out of sight, but in the Hassan Khel country they seemed much more civilized and were at all times *en evidence*. They seemed better dressed too and wore more jewellery than their less favoured sisters in other parts of the country. The men generally wear a *chadar*, a loose shirt, baggy *pajamas* and a turban, though the poor are content with a coarse blanket round the waist and another thrown over the shoulders. The men's clothes are usually white, while the women affect dark blue or sometimes red. Unmarried girls, however, dress in white.

Ornaments.—Silver ornaments only are worn by the women, the following being the most important :—Armlets, ear-rings (consisting of a number of little rings inserted round the ear), necklet, a chain with "ghungris" for the forehead, and a waist-belt of rupees. In the case of an unmarried girl a rupee is added to the silver chain, but this is removed on her marriage.

Food.—The principal article of food is maize bread baked on a stone, though bread made of wheat, barley and *jowar* is also sometimes eaten. This is eaten with buttermilk in the morning, but plain in the evening. Meat is rarely eaten, and only on occasions of rejoicings or when guests are entertained. *Dal* is not an article of food.

Intoxicating drugs and tobacco.—Tobacco is universally eaten. The dry leaf is rubbed in the hand and the powder then smeared on the teeth and gums. This custom prevails to a

certain extent even amongst women. The use of intoxicating drugs is not common, though I met several who indulged in this vice. A few have even taken to liquor.

Education.—The vast majority of Sheranis are, as might be expected, illiterate. There are *mullas* in a few of the larger villages who teach the boys to recite the *Koran*, and sometimes to read a limited number of Pushto books. At Murgha I once came across a man reading one of these. The chief's secretary is always a *mulla*. Murtaza Khan's right hand man, Ghulam Rasul, belonged to this class.

Criminal and civil justice.—Crime is rare in the tribe. Adultery is not common. If a man is found *in flagrante delicto* by the husband, the latter kills both his wife and her paramour on the spot. In case there is strong ground for suspicion the woman is generally killed and the right foot or nose of her supposed paramour cut off. I came across a number of footless Sheranis. The operation is performed in a most brutal manner, generally with a blunt knife, and the bleeding stump is then plunged into boiling oil to stanch the blood.

For house trespass with theft a fine of Rs. 100 is generally inflicted, restoration of the stolen property or its value being also insisted on. The fine in the case of ordinary theft is much lighter, but the stolen property or its value must in every case be restored. In cases when hurt is inflicted compensation at varying rates is paid. Serious offences, such as murder, are of comparatively rare occurrence, retaliation being prompt in such cases. In cases of blood-feud the quarrel is strictly limited to the actual offender. The blood-money is fixed at Rs. 700 for males and Rs. 350 for females. Another curious custom, which as far as I know is peculiar to this tribe, is that should vengeance be enacted in hot blood, *i.e.*, immediately after the offence has been committed, no blood-money is claimable, but if some time is allowed to elapse before the offended party takes his revenge, then compensation is payable to the relations of the murdered man at half rates, *i.e.*, Rs. 350 for a male and Rs. 175 for a female. Unimportant cases are generally settled by the parties themselves; but in serious cases, if one party is desirous of coming to terms with the other, some influential men of the village or section are invited to use their good offices with a view to a settlement. The ceremony of "*nahora*" is then gone through, and should no objection be raised, a *jirga* is assembled and the matter amicably arranged. Amongst the Sultanzais and Hassan Khels there is even an appellate court. In the event of disagreement amongst the members of the *jirga*, or if either party dissents from the terms of the award, recourse is had to Mulla Salim by Sultanzais, and to Sadrak by Hassan Khels. The justices of appeal after hearing the parties and examining the members of the *jirga* give their decision, which is regarded as final. Mulla Salim is the principal *malik* of the Sultanzais, and owes his appointment no doubt partly to his position, but chiefly to his character for integrity. In Sadrak's case the office is an hereditary one. The fees charged by these men for their good offices are Rs. 10 from each party by Mulla Salim and Rs. 5 by Sadrak, besides the "costs in the suit," or in other words, the reimbursement of the expenditure incurred in entertaining the *jirgas*, parties, witnesses, &c. In other sections of the tribe the finding of the *jirga* is considered final.

Another curious fact worth mentioning in this connection is that interest is charged at the rate of Re. 1 per cent. *per mensem* on all cash transactions. Where grain is the medium of exchange interest is paid at the rate of Re. 1-4-0 per harvest. Mortgages are contracted verbally, no record of the transaction being made. Land is the only article mortgaged. In some cases it is only hypothecated as security for a debt, but as a general rule possession is retained until the debt is paid off.

Dwelling houses.—The people generally live in stone-built houses with flat mud roofs, each hut containing a single room about 8 feet high and 10 feet square, which is occupied by the whole family. Doors are considered a superfluous luxury, the doorway generally being closed with a bush. The stock of furniture is very limited, consisting as it does of a mat or two and a couple of cots made of olive wood and woven with a sort of grass called *burwaz*.

Measures and weights.—Every article sold is meted out by measure as weights are not used. The following is the table of measures:—

4 <i>Lapas</i> (a palm full)	...	...	= One <i>adhani</i> .
2 <i>Adhanis</i>	...	...	= One <i>kurwa</i> .
2 <i>Kurwas</i>	...	...	= One <i>nimozha</i> .
2 <i>Nimozhas</i>	...	...	= One <i>anda</i> (sack).

An *anda* is equivalent to 3 maunds 5 seers English weight.

Currency.—The old Sikh Derajat rupee (= 14 annas) called "*mirabi*" is the principal medium of exchange, Indian rupees not being in favour. Accounts are made up in rupees, annas and pice, but as no pieces exist representing the fractions of a rupee, grain or some other article is generally given for sums under a rupee in value.

Menials.—No barbers or shoemakers are found in the country. Men shave one another when necessary, and they make their own sandals. A few carpenters and blacksmiths live in the large villages. These are said to be the descendents of men who came from

the Daman and settled here. Potters do not exist. The women make their own vessels, though they are not able to manufacture cups (*pialas*) and large broad vessels like *patris*, which are imported from the Daman. There are no weavers in Largha. In Bargha I believe there are a dozen families of this class, who form a village community of their own. They make blankets, *tagars* (a sort of carpet), and sacks. In the cold season they visit the Largha country and carry on their manufacture there. *Chamars* and sweepers are unknown in Largha.

Imports and exports.—The only articles of export are *ghi*, *chilgoza*, timber, honey, wool, cheese and resin. The imports are much more numerous, consisting chiefly of grain of various kinds, cloth, tobacco, shoes, earthenware, salt, fire-arms, swords, ammunition and the like.

Diseases and medicines.—Cholera is almost unknown. It is said that it broke out once many years ago at Drazand, but this is almost now a tradition. Small-pox is rare. Sheranis dread it very much, and will, if possible, avoid entering a village where a case is known to exist. A person suffering from small-pox is generally removed to a distance from the village and kept there until he dies or recovers under the care of some one who has had the disease. No one, not even his nearest relation, will approach him. In the event of the patient's recovery, which rarely happens, his clothes are fumigated with the smoke of burning *ak* or *khagal* leaves. Syphilis is unknown. Fever is common at certain seasons, and is treated with the expressed juice of *akri* leaves. In bad cases the sheep skin cure is used, *i.e.*, the patient is enveloped in the skin of a freshly-slaughtered sheep (in summer a goat's skin is employed) which is said to be a drastic but very efficacious remedy.

Tenures.—Cultivated lands are generally selected on both sides of a perennial stream. The area can be cultivated at will by the proprietor either towards the stream or in the direction of the hill-side by means of terraced fields. He of course can only extend his bounds opposite his own lands, and should another person wish to undertake the labour he must obtain the proprietor's consent and pay him compensation called "lungi." No land is held in common, each plot having its own individual proprietor. As a rule the proprietor cultivates his own land, which is seldom more than a few *kunals* in extent. In some cases, however, if the proprietor is too poor to afford the expense of purchasing bullocks he rents his holding to another annually or for a term of years. The proprietor supplies the seed and the manure and receives from three-fourths to four-fifths of the gross produce. If, however, the land has been lying waste for a long time and requires considerable labour to bring it under cultivation, the tenant takes half the produce and pays half the cost of the seed and manure.

Cultivation.—Manure is extensively used in Largha, its advantages being well understood. It is composed of a mixture of sheep's dung and earth and is carefully prepared. Land is generally manured once a year during the *rabu* sowings. Without manure only a single crop results. The usual crops are maize in the autumn and wheat and barley in spring. Rice, *jowar* and tobacco cultivation is rare. Carrots and radishes are sometimes cultivated. Three waterings are said to be necessary to ripen the crop. The Sheranis are not diligent cultivators, and the land is only once ploughed before sowing. The division of water for purposes of irrigation is carried out with great care, each sub-section of the tribe taking the water for a fixed period of time, according to its proper share. Threshing is performed in a most primitive fashion with stout sticks. Women work regularly in the fields. Indeed, they seem to be veritable hewers of wood and drawers of water to their lazy husbands. There are altogether eight flour-mills in the Uba Khel and Hassan Khel countries, five near Drazand and three in the neighbourhood of Murgha. These are owned by individual proprietors, who take one sixteenth share in the case of barley and *jowar* and one-twentieth in that of wheat as their wage.

Shrines.—The following are some of the principal shrines in Largha :—

1. Takht-i-Suliman in the Takht range.
2. Khwaja Pir at Pirghundi, near Zor Shahr.
3. Tarin Pir at Parwara.
4. Abbi Nika and Mian Adam at Khaisara.

Others, such as Naurang Nika near Landai Azim, Khan Muhammad Akhundzada at Drazand, Jalal-ud-din near Baspa, Bulait Nika near Dag, Haitam Nika at Landi Sultanzai are of less note.

The first is the celebrated throne of "Star-taught Solomon." It is very difficult of access and but few visit it. There is no tomb there, and of course it has no *mujawar*. Sick people are sometimes taken up to it and prayers offered for their recovery to the saint. Children, too, are occasionally buried in the ground below it. The shrine is visited both by Hindus and Muhammadans, and is held in high veneration by all classes and creeds in the surrounding country.

Next in importance comes the Khwaja Pir, which, as well as Nos. 3 and 4, is a *Saiad* shrine. It is much resorted to by Sheranis, specially those of the Uba and Hassan Khel sections, and an hereditary *mujawar* lives there, who is supported by the offerings of the

faithful. Annual festivals are held both here and at the Takht, when offerings are made and cattle sacrificed. Sacrifice is always made at one of these shrines on special occasions, as for instance when the Hassan and Uba Khels entered into a compact to oppose us should we enter their country. The Parwara shrine is chiefly resorted to by members of the Chuhar Khel section. Khaisara was founded by Abbi Nika and his brother Mian Adam Bukhari, *Saiads*, who settled here some 80 years ago. Their descendants are held in great respect by all Sheranis, and their valley is one of the most flourishing in Largha, but the shrines of the *Saiad* brothers are of perhaps too recent date to be much venerated. I may mention here that the Hassan and Uba Khel sections jointly paid up the *Saiads'* share of the fine imposed on the Sheranis.

Fauna.—*Markhor* and *urial* are plentiful in the hills. The pig is extinct. Leopards and hyenas are occasionally seen, but ravine deer do not seem to exist in the country. Foxes and jackals are found near the plains, and badgers are very common. The lammergeyer and large black vulture are common everywhere in the higher ranges. Amongst game birds black partridge in the *kaches* and *chikor* and *sisi* in the hilly parts are fairly common. On the higher slopes of the Takht the jay, black bird, wood pigeon, cuckoo and thrush are met with. Every running stream abounds in fish (chiefly *mahsir*), some of which were caught up to 8 lb.

Flora.—The following are some of the principal trees or shrubs that grow in the country :—

- Pilosa (*Acacia modesta*).
- Pastuwanna (*Grewia oppositifolia*).
- Gurgura (*Reptonia buxifolia*).
- Olive (*Olea Europæa*).
- Holm oak (*Quercus Ilex*).
- Laghanai (*Danhne Lycium*).
- Willow (*Salix*).
- Pine (*Pinus longifolia*).
- Chilgoza (*Pinus*—).
- Fig (*Ficus carica*).

Olives are found almost everywhere, but they are finer and more frequent the nearer you approach the main range. The oak I noticed at Namar Kalan, and pines are only found at high elevations (not generally under 7,000 feet).

Mines and metallic products.—Oil is found in small quantities near Mogal Kot, and iron is traceable in numerous places. Coal is said to exist in some parts of the hills, but I saw no signs of it. There is a hot sulphur spring at the mouth of the Gat pass, and I observed large quantities of *kankar* near Drazand.

Character and appearance.—The Sheranis (or Maranis, as they prefer to call themselves) are perhaps the most uncivilized tribe on the Dera Ismail Khan border, and have all the characteristics of wild races. They are not given to thieving, but lying is a vice which I am afraid, intercourse with our district has taught them, as amongst the Sultanzais and Khiddarzais who inhabit the slopes of the Takht and are far removed from our civilizing influence a Sherani's word can generally be relied on.

Murder or killing for the mere lust of blood is very rare. They are not so cheerful and joyous as their neighbours, the Mahsuds, and seem to take the world much more seriously. Fanaticism cannot be assigned to them as a fault, and their performance of the rites of religion struck me as being very perfunctory. They are lazy in the extreme and thriftless. In appearance they are ill-favoured, low-sized and wiry with high cheek bones. They are by no means a manly race, though an exception in this respect might perhaps be made in favour of the Khiddarzais, some of whom are fine-looking men. Each tribe has got its "nika," or nominal chief, who is entitled to tithes at the rate of four or five seers per family per harvest. Fattah Khan of Drazand is the only *malik* who, as far as I could ascertain, regularly levies this, though the other chiefs, Palak Khan and Pur Dil, also claim it. Murtaza Khan, the Khiddarzaï chief, also receives "aids" in grain, cattle and cash from his fellow tribesmen, but whether by way of arms or tithes is not certain. Of this, however, there is little doubt that he spends all he gets in entertaining people who visit him, by which he has added enormously to his popularity.

No.	Sub-Division.	Section.	Sub-Section.	Names of Malik or Headman.	NAMES OF VILLAGES, WITH NUMBER OF HOUSES AND OF FIGHTING MEN.			REMARKS.
					Village.	Houses.	Fighting men.	
I	HASSAN KHEL.	Ahmadzai.	1. Yasinzai Karammaizai.	Sarwar Khan.	1. Kuria Wasta ...	15	35	
				Haidar Khan.	2. Aghbark ...	8	10	
				Bakara.	3. Chachu-ubai ...	15	20	
				Mulla Ata Muhammad.	4. Murghbal ...	100	100	
				Darro Khan.	5. Shina Khwaja ...	12	14	
				Hussen Khan.	6. Charkundai ...	3	6	
				Sipahi Khan.	7. Sarwakai ...	20	25	
				Gul Khan.	8. Laghar Kazha ...	12	14	
			Shammal.	9. Shinkai Kuna ...	20	20		
			Murtaza Khan.	10. Nasrat Ragha ...	1	2		
			Mel-ulla.					
			2. Arozai ...	Khalwat.	TOTAL ...	206	246	
				Kadir.				
				Jangi Khan.				
				Sher Gul.				
				Shakur Khan.				
		Hezai.	1. Sherbezai ...	Khan Alam.	1. Zaramma ...	6	6	
				Lalak.	2. Sur Ragha ...	10	10	
			2. Sakzai ...	Sarwar (II).	3. Shinapanga ...	50	60	
				Islam.	TOTAL ...	66	76	
Karmanzai.	Karmanzai ...		Guldad Khan.	1. Ghur Lamar ...	40	45		
			Lal Khan.	2. Pasta ...	30	30		
		Mamak.	3. Kachchi ...	20	20			
		Majak.	4. Isparghundai ...	12	10			
		Gauhar.	5. Karamma ...	25	30			
		Machak.						
		Rahman.	TOTAL ...	127	135			
		Tarku Khan.						
		Grand Total, Hassan Khel ...	399	457				

Statement showing Main Sub-Divisions, Sections, Sub-Sections, Names of Malik, and Names of Villages, with Number of Houses and Fighting Men in each, of the Bargha Division of the Sherani Tribe—concl'd.

No.	Sub-Division.	Section.	Sub-Section.	Names of Malik or Headman.	NAMES OF VILLAGES, WITH NUMBER OF HOUSES AND OF FIGHTING MEN.			REMARKS.	
					Village.	Houses.	Fighting men.		
II	UBA KHEL.	Khiddarzai.	.....	Sadik.	1. Mot Nigozai ...	15	25	
		Mamaizai.	Yahyazai ...	Malik Aman ...	2. Isobzai ...	12	13		
				Mian Khan ...					
					TOTAL ...	27	38		
		Ahmadzai.	Senaizai ...	Masti Khan ...	Korin Kach ...	3	4		
				Grand Total, Uba Khel ...	30	42			
III	CHUHAR KHEL.	Sulimanzai.	Barakzai ... Kudanzai ...	Barkharder Khen ...	Kila Barkhardar ...	31	41		
				Hindkai ...	.....			
				Izzat Khan ...	Loara ...				
				Bamak ...					
				Umak ...					
				Hassanzai ...	Kakar Khen ...			Zapip ...	
				Salikanzai ...	Azam Khan ...				
			TOTAL ...	31	41				
				Grand Total, Chuhar Khel ...	31	41			

ABSTRACT.

Sub-Division.				Villages.	Houses.	Fighting men.	REMARKS.
Hassan Khel	...	...	...	18	399	457	
Uba Khel	...	...	...	3	30	42	
Chuhar Khel	...	...	...	3	31	41	
Grand Total of Bargha Division				24	460	540	

Statement showing Main Sub-Divisions, Sections, Sub-Sections, Names of Maliks, and Names of Villages, with Number of Houses and Fighting Men in each, of the Largha Division of the Sherani Tribe.

No.	Sub-Division.	Section.	Sub-Section.	Name of Malik or Headman.	NAMES OF VILLAGES, WITH NUMBER OF HOUSES AND OF FIGHTING MEN.			REMARKS.						
					Village.	Houses.	Fighting men.							
LASSAN KHIL.					Hezai.				1. Shozai ...	Ghazni. Dadrul. Azmat.	1. Landi ...	16	25	
									2. Murgha ...	50	60			
									3. Jazha Pazah ...	5	4			
									4. Sher ...	35	40			
									5. Matawar Landai	16	25			
									6. Tor Narai ...	4	6			
									7. Lomai ...	35	40			
									8. Kot Palak Khan (Wazir Kot).	40	60			
									9. Aughazha ...	20	30			
									10. Karkan Mela ...	16	30			
					Ahmadzai.				5. Barakzai ...	Gul Khan. Sarbuland. Nawaz. Fatteh Khan.				
									6. Khalilzai ...	Mir Ajab. Astanadar. Said. Sher.				
									1. Yasinzai ...	Palak Khan, Tuman- dar.				
									2. Ismailzai ...	Mahsud. Akhtar. Mian Nur. Nazar.				
									3. Hassanzai ...	Gulistan. Akhtar. Sarfaraz. Nauroz. Said.				
									4. Daulatzai ...	Malikut. Dadi. Sher Muhammad.				
									5. Istarakzai ...	Khair-ud-din. Jamal Khan. Khalil.				
									6. Jamalzai ...	Mabin. Saidulla. Jabar. Kainran.				
									7. Haidarzai ...	Mirak. Baha-ud-din. Ispin.				
									Total of Hezai and Ahmadzai.					237	320

Statement showing Main Sub-Divisions, Sections, Sub-Sections, Names of Maliks, and Names of Villages, with Number of Houses and Fighting Men in each, of the Largha Division of the Sherani Tribe—contd.

No.	Sub-Division.	Sections.	Sub-Section.	Name of Malik or Headman.	Names of Villages, with Number of Houses and of Fighting Men.			Remarks.
					Villages.	Houses.	Fighting men.	
I—contd.	HASSAN KHEL—contd.	Miani.	1. Hassan Khel	Mir Afzal. Azim Khan. Shadakh. Muhammad Yar.	1. Tizrai ...	30	40	
			2. Brahim Khel	Bazi. Rahmat Khan. Rahimdad. Mahin. Pirtad. Paigul.	2. Karam ...	30	40	
					Total Miani ...	60	80	
				Grand Total of Hassan Khel	...	297	400	
II	UBA KHEL.	Land Ahmad.	1. Shakarzai	Fatteh Khan, Tuman-dar. Din Muhammad, Akhundzada. Toi Muhammad. Jangul.	1. Drazand ...	100	100	
			2. Brahimzai	Azim Khan Tor. Rasot.	2. Landi Gadiazai ...	15	15	
			3. Gadazai	Murtaza Khan. Hassan Khan.	3. Landi Mula Khar	20	25	
			4. Mirzai	Ozak. Malai.	4. Zor Shahr ...	21	21	
			5. Anizzai	Azim Khan Sur.	5. Maidan ...	25	30	
			6. Tukarizai	Basya.	6. Karam Mirzai ...	8	8	
		Isazai.	1. Niyamatzai	Hawas Khan. Tor. Kadir.	7. Girdghun ...	25	30	
			2. Shadizai	Awan. Rahman.	8. Dag ...	8	10	
			3. Mohammadzai	Mirgul. Ahmad Shah.	9. Illias Khezai ...	4	5	
			4. Shabizai	Guldad. Terman.	10. Nishpa Muham-madzai.	9	9	
			5. Bakizai	Jangai. Mir Khan.				
			6. Wariazai	Sawal. Miandad.				
			7. Hezai	Jalal. Faizulla.				
			8. Bibizai	Baki.				
					Total of Land Ahmad and Isazai.	235	253	

Statement showing Main Sub-Divisions, Sections, Sub-Sections, Names of Maliks, and Name of Villages, with Number of Houses and Fighting Men in each, of the Largha Division of the Sherani Tribe—contd.

No.	Sub-Division.	Section.	Sub-Section.	Name of Malik or Headman.	NAMES OF VILLAGES, WITH NUMBER OF HOUSES AND OF FIGHTING MEN.			REMARKS.
					Village.	Houses.	Fighting men.	
II—contd.	UNA KHEL—contd.	Mamanzai.	Sultanazai ...	Mulla Salim. Hamim. Bare Khan. Salih. Shadakh. Shinku. Shahzad. Kamran. Gandapur. Khar. Fatteh. Mashak.	1. Raghasar ... 2. Sarop ... 3. Lushezai ... 4. Jat Aghbach ... 5. Landi Sale ... 6. Zindawar ... 7. Paizhori Mela ...	30 8 6 20 16 12 10	35 10 8 25 20 15 13	
					TOTAL ...	102	126	
		Saiads of Khalsara.	Bukhari ...	Bahar Shah. Atal Shah.	1. Salganai ... 2. Martanai ... 3. Darwazai ...	10 5 8	13 5 10	
					TOTAL ...	23	28	
		Shibizai.	1. Pirakzai ...	Kala Khan. Dadu.				
			2. Babarzai ...	Saidai. Nawak.				
		Muhammadzai.	3. Chakarzai ...	Momin. Kapur. Rahmak.				
			1. Hazarzai ...	Darya Khan. Kalu Khan.	1. Spin Tangi ...	12	15	
			2. Kamardinzai ...		2. Landai Azim Khan	20	35	
			3. Selim Khanzai ...	Azim Khan, Tuman-dar. Zarif Khan. Jatai Khan. Mirak. Bahar. Abdulla. Ziyar.	3. Shekh Mela ... 4. Karah ... 5. China ...	30 5 20	40 5 30	
			4. Jibain ...	Momin. Bahawal. Bonai.				
			5. Rezai ...	Samand Khan. Jamai.	TOTAL ...	87	125	
		Isazai and Manezai.	1. Hezai ...	Amu Khan. Fatteh Khan. Nazar Khan. Toran. Jhandai. Gulun.	1. Karam Hezai ... 2. Inzard Nishpa ... 3. Shundai ... 4. Naskora ... 5. Orai ...	16 7 5 3 4	15 7 7 4 2	
			2. Musazai ...					
			3. Ismailzai ...	Sadagul. Surat Khan. Asil. Mohan. Atang.	6. Ambar ... 7. Nishpa, Atal Khan Kahol. 8. Sarkai Karam, Shahal Kahol.	3 30 10	3 30 10	
					TOTAL ...	78	78	
			Shekh ...	Bund. Mihman. Sher.	1. Jalarg ...	12	15	

Statement showing Main Sub-Divisions, Sections, Sub-Sections, Names of Maliks, and Names of Villages, with Number of Houses and Fighting Men in each, of the Largha Division of the Sherani Tribe—concl'd.

No.	Sub-Division.	Section.	Sub-Section.	Name of Malik or Headman.	NAMES OF VILLAGES, WITH NUMBER OF HOUSES AND OF FIGHTING MEN.			REMARKS.
					Village.	Houses.	Fighting men.	
II—concl'd.	UBA KHEL—concl'd.	Akhmad.	Khiddarzai ...	Murtaza Khan. Shinku. Shamir. Baluch. Shergul. Bakhtagul. Ranagul. Kajal Khan. Sheran. Sadik. Bhagu. Shinagai. Jabar. Mayan.	1. Namar Kalan ...	50	50	
					2. Namar Khurd ...	10	8	
					3. Torkanai ...	10	10	
					4. Bohaur ...	10	10	
					5. Shina Kazha ...	12	12	
					6. Khushbini ...	3	3	
					7. Gurkhezai ...	15	20	
					8. Koz ...	15	20	
					9. Biaran ...	8	30	
					TOTAL ...	133	163	
		Mamai.	1. Sultanzai ... 2. Muhammadzai ... 3. Umarzai ... 4. Kanuzai ...	Khwajak. Samand Khan. Mirza Khan. Bakhtyar Khan. Nasibgul. Jabrail.	1. Tangi Kuhna ...	15	15	
					2. Parwara ...	70	70	
					3. Band ...	6	6	
					TOTAL ...	91	91	
Grand Total of Uba Khel ...						761	879	
III	CHUHAR KHEL.	Bahramzai.	1. Bahramzai ... 2. Lalakzai ... 3. Khanzai ... 4. Jamalzai ... 5. Mananzai ... 6. Karozai ... 7. Naurozai ... 8. Baizai ...	Karai Khan. Abdur Rahman. Islam. Roedar. Namdar. Baru Khan. Azam Khan. Kamaruddin Khan. Yakub.	1. Akhar Kuhna ...	4	5	
					2. Sakhana ...	20	25	
					3. Nishpa ...	10	15	
					4. Harbora ...	3	5	
					5. Walwasta Jamalzai	4	5	
					6. Walwasta Karro- zai.	6	6	
					7. Walwasta Muham- madzai.	6	10	
					8. Walwasta Sorwan- zai.	6	8	
		Allahdadzai.	1. Ababakrzai ... 2. Sulimanzai ... 3. Hezai ... 4. Baizai ... 5. Allahdadzai ... 6. Payozai ...	Chara. Khashu Khan. Dadun. Sanai. Manu. Honai. None. Pur Dil Khan, Tuman- dar of Chuhar Khel. Jangul Khan. None.	9. Kharghwazha ...	15	25	
					10. Warghari ...	18	20	
					11. China Sar ...	4	5	
					12. Gar Nikal ...	10	8	
					13. Mogal Kot ...	23	23	
					14. Nahara ...	5	7	
					15. Baskai ...	32	40	
					Total of Bahramzai and Allahdadzai.	166	207	
		Marhels.	1. Ibrahimzai ... 2. Abdur Rahman- zai. 3. Harunzai ... 4. Kamalzai ...	Nurulla. Mir Afzal. Saddo. Shin. Azak.	1. Ucha Sesta ...	13	20	
					2. Walia ...	7	10	
					3. Ghoeba ...	8	10	
					4. Karam ...	8	10	
		TOTAL ...	36	50				
Grand Total of Chuhar Khels (includ- ing Marhels).						202	257	

ABSTRACT.

SUB-DIVISION.	Villages.	Houses.	Fighting men.	REMARKS.
Hassan Khel	12	297	400	
Uba Khel	46	761	879	
Chubar Khel	15	166	207	
Marhel	4	86	50	
Grand Total of Largha Division.	77	1,260	1,536	

Appendix J.

I.—Report on the working of all Departments.

All that forethought and arrangement could do was done to equip the force with transport and commissariat supplies, and to stock the magazines in the field. The numerous detachments into which I divided the force were often placed in positions where ordinary pack animals could not carry supplies, and in a country destitute of provisions of all kinds the supply question was a very difficult one. I cannot speak too highly of the way in which these difficulties were met by the officers and sergeants of the commissariat department serving with the force.

The following reports are attached :—

- i. Commissariat, by Lieutenant-Colonel Burlton-Bennet.
- ii. Transport, the Proceedings of a Special Committee assembled at Quetta.
- iii. Veterinary, by Veterinary Surgeon O'Donel.
- iv. Medical, by Deputy Surgeon-General Lithgow, C.B., D.S.O.
- v. Ordnance, by Captain Dunsterville, R.A., Ordnance Officer, Quetta.
- vi. Equipment.
- vii. Field Service Equipment Tables.

(Sd.) G. S. WHITE, *Major-General.*

9th March 1891.

i.—COMMISSARIAT.

Report by Lieutenant-Colonel J. R. Burlton-Bennet, Chief Commissariat Officer.

With reference to District Order No. 1044, dated 9th December 1890, I have the honour to submit the following report on commissariat and transport arrangements and working in connection with the late Zhob Field Force, Khiddarzal Sherani expedition.

2. As soon as the probable composition of the force and its sphere of operations was known I deputed Lieutenant J. W. G. Tulloch, Deputy Assistant Commissary General, to Apozai to ascertain from the political officer there the resources of the country in fodder, fuel and slaughter animals and the best or most probable places for forming depôts.

3. As soon as I received information on these points I directed Lieutenant Tulloch to arrange for supplies of fodder and fuel to be stacked at various points, giving him the quantities required and probable dates on which required.

4. I then told him to consult the political officer at Apozai as to the feasibility of laying in supplies at Apozai from the Punjab by the Gomal or any other route, and, if approved, to arrange through him with the civil authorities in the Derajat to lay in sufficient stores for one and a half months for the whole force, and at the same time I gave him a detail of the articles and quantities of country supplies required.

5. I then arranged for one month's supplies for the whole force to be collected and sent out to Kazhe, including nine days' supplies to accompany troops from Quetta and one and a half month's supplies for British troops to be sent to Apozai. Six days' supplies to accompany troops from Khanai and six days with troops from Loralai.

6. When these arrangements were well in hand Lieutenant Tulloch was nominated Executive Commissariat Officer with the force, and I ordered him to Kazhe to inspect the arranging of the depôts going on there and to meet the force.

7. Orders were received shortly before the force marched, to move the depôt on from Kazhe to Toi War, which was done by making two trips; and on arrival at Hindu Bagh it was decided that No. 1 column was to be detached and to proceed *via* Kila Basharat, so I had to go on to Kazhe to send six days provisions for them to Shina Khula.

8. I arranged that Lieutenant H. B. Murray, Deputy Assistant Commissary General, who had been appointed Brigade Transport Officer, should go with No. 1 column and Lieutenant Tulloch with No. 2 column.

9. I would mention that I found myself very short-handed in officers, and I consider that instead of there being only three commissariat officers with the force, including myself, there ought to have been a commissariat officer with each column as Executive Commissariat Officer with an assistant as Brigade Transport Officer, and I should have had an assistant with me for transport supervision and also a base depôt officer.

* * * * *

15. *Transport mules.*—The mule carriage with the force was composed entirely of Government mules and was almost entirely in regimental charge. The mules had a very trying time of it, what with long hot marches, climbing hills, bad roads and heavy rain, but there were very few casualties, no sickness to speak of and very few bad backs and galls which in

my opinion reflects great credit on commanding officers of corps and their transport officers and assistants, as such a result could only be brought about by careful saddling, loading, supervision on line of march and grooming and care of animals and saddlery in camp.

This seems to prove how advantageous it is to make commanding officers of corps

I concur in these remarks; nothing has impressed me more than the improvements of late years in the care and knowledge devoted to transport.

G. S. W.

through a course of transport training.

Saddlery.—The new pattern of saddlery with thong fastenings to the breeching and

Treated of in report of Special Committee on Transport to which my views are attached.

G. S. W.

and badly fastened, and the saddle was incessantly riding forward and tilting up from behind, pulling the breeching under the tail. This caused much delay and inconvenience and this pattern of saddlery was condemned by every one.

Tarpaulin.—The waterproof tarpaulin supplied at the scale of 1 per 3 mules to cover

Treated of in report of Special Committee on Transport.

G. S. W.

would be better to have these articles made of a more pliant material and to supply one small one to each mule for his saddle.

Iron shackles and chains.—The iron shackles and chains were also a source of much

Treated of in report of Special Committee on Transport.

G. S. W.

Head-stalls.—The head-stalls were also found most troublesome, requiring constant

Treated of in report of Special Committee on Transport.

G. S. W.

lasted several months in cantonments, but soon became irreparable and unserviceable in the field.

16. *Camels.*—With the exception of 7 Government camels supplied for conveyance of treasure, all the camel carriage was hired and was supplied by the political department who made a sort of contract or agreement with the following men :—

1. Mian Khan.
2. Atta Muhammad.
3. Duria Khan.
4. Abdulla Khan.
5. Sawal Khan.
6. Allah Bakhsh.

These men seem to have had the greatest difficulty in obtaining the full number required, the number supplied was not in excess of 2,348, which seems to show that in the event of mobilization being ordered this district cannot be relied on for much carriage.

I consider, however, that Abdulla Khan and Atta Muhammad did their best to obtain

Vide note at end of this report.

G. S. W.

trouble in the field, but their arrangements for keeping accounts of camels and for feeding men and animals were very faulty.

There appeared to be no organization and discipline among them, they had no petty officers, and scarcely any *munshis*.

The camels were supplied at the last moment and the campaign was so short and the columns were so soon separated that it was impossible for us to do much in the way of organizing this camel transport. They should have supplied sufficient *munshis* to have allowed of one being attached to the chief commissariat office and one to the transport office of each column, in addition to those they required with themselves and with the camel men. The complaints of camel drivers of having no food and of being unable to procure it for themselves and animals were numerous, and we had on more than one occasion to supply them, although it was arranged before the force started that we were not to make any arrangements for feeding men or animals of hired transport.

I think in future it will be necessary to make provision for feeding them occasionally on payment, the cost to be deducted from the camel contractors or suppliers at time of settlement of accounts, these contractors keeping an account of supplies issued for their own satisfaction.

17. *Bullocks and donkeys.*—Bullocks and donkeys were employed sometimes in carrying

I have the highest opinion of the Afghan donkey. Good-sized ones will carry 2 maunds, and carry that weight over the worst ground. They fatten on the poorest pasturage and keep fit when mules or ponies would deteriorate down to inefficiency. They work habitually in droves, consequently have freer individual action in awkward places, move on a broader front and require fewer attendants.

Bullocks I do not care about as transport animals marching with troops. They are terribly slow at the best of times, and get worse as they fall off in condition. They are useful no doubt in carrying stores in rear of the army by contract.

G. S. W.

18. *Loading frames and nets.*—Camel and mule loading frames were found of great use,

Treated of in report of Special Committee on Transport.

G. S. W.

also camel loading nets. I would recommend that these loading frames be used always for ammunition and reserve ammunition, and that loading nets be used for kits. These latter to be available for bringing in fodder when necessary after arrival in camp.

19. *Tents.*—The tents at present supplied for the use of followers are too large, the

Treated of in report of Special Committee on Transport.

G. S. W.

consequence is that, when men are detached in small numbers they have no shelter. I would suggest the native cavalry *pals* being supplied for followers at six men to a tent.

20. *Kits.*—The kits according to regulations are found to weigh about 27 lbs., whereas

Treated of in report of Special Committee on Transport.

G. S. W.

carriage is allowed for 10 lbs. per man; this necessitates overloading. I would recommend that 27 lbs. or six men to a mule be the authorized allowance.

21. *Ambulance saddles.*—Ambulance saddles were much complained of. They are too

Ambulance saddles proved a failure in Zhob. The ordinary riding saddle procurable at Cawnpore at low rates would be much preferable.

G. S. W.

wide and uncomfortable for sick men to ride on and often slip—in fact some patients were injured in this way.

I accept this.

G. S. W.

22. *Dubbing.*—The authorized scale 4 ozs. per set of gear per month of dubbing is insufficient, it should be increased to at least 8 ozs.

Treated of in veterinary report.

G. S. W.

23. *Salutris.*—The scale of *salutris* is too limited, but this and the scale of medicines, &c., allowed are matters for representation by the veterinary department.

24. *Medical establishments.*—The medical department should give the earliest intimation

I concur. The establishments were only handed over to the medical department the night before the march.

G. S. W.

possible of their requirements in establishments especially in Quetta as such men as *tindals*, lascars, sweepers, cooks, *bhistis*, &c., are obtained with difficulty, often having to be obtained from India.

25. *Kahars and dulis.*—The question of taking *dulis* and *kahars* into the field is one for

Treated of in report of Special Committee on Transport.

G. S. W.

I would not give *duli* bearers weapons as such, but I think axes for cutting wood, and sickles for cutting grass would be most useful.

G. S. W.

the medical department to settle, but in my opinion *duli* bearers should be enlisted, instructed, and entirely controlled by the medical department. No doubt men accustomed to work by stages in the plains are not as efficient when they have to plod along at a walk for hours with a *duli*, accompanying troops up and down hill. In peace time permanent *duli* bearers are employed on all manner of coolie work and seldom have any real

or regular *duli* work. Each man should on service be equipped with some weapon he knows how to use, and in the Zhob expedition I supplied them with light axes which they can best handle as a weapon and which is also useful in their hands for cutting fuel for themselves or for troops.

26. *Followers' clothing, &c.*—Commanding and medical officers should be required to see that followers in camp are sufficiently clothed and accommodated in tents, these men often get ill because they will not clothe themselves properly at all times, and are too lazy to pitch their tents or for some reason or other sleep outside.

27. *Rations, British troops, meat.*—Cattle are not procurable in the Zhob district, so the fresh meat rations were mutton, with the exception of some cattle, which were sent out from Quetta. Sheep, however, are plentiful, and nearly one thousand were supplied by the Nasars. The sheep were good.

28. *Bread*.—Bread was made daily and was very good, no biscuits were issued, the troops preferring to make their own bread with baking powder on flying columns to being served out with biscuits, &c.

29. *Wood*.—Firewood was not plentiful and the troops were supplied on some occasions with wood procured from the old buildings by the political officers and had on other occasions to collect drift wood from the rivers.

30. *Vegetables*.—No vegetables were locally procurable, so potatoes and onions were arranged for at Quetta and sent to Kazhe and Apozai.

31. *Water*.—Water was often bad and difficult to obtain. No *pakhals* are provided for in baking equipment, but they should be at the scale of 2 pairs per battery, Royal Artillery, and 6 pairs per regiment. Spare mules could be used for bakery water as it is only required in camp.

I concur in this.

G. S. W.

32. *Native rations, dal*.—*Dal* was not much approved of by the native troops. It was excellent *dal*, but is a difficult article to cook. A smaller ration might be given, but it should not be entirely abolished as many men consider it a staple article of food.

33. *Gur*.—*Gur* should always be allowed whether meat is supplied or not as it is more a condiment than an article of ration and without it the men's food is unpalatable.

34. *Amchur*.—*Amchur* is not liked, and it was with difficulty the men were made to eat it.

35. *Scale of rations*.—It was very generally the opinion of officers with the force that the followers' rations should be increased, the *atta* ration from 1½ lbs. to 2 lbs. and *ghi* from 1 oz. to 2 ozs., and fuel from 1½ lbs. to 3 lbs., and that the scale of *amchur* should be reduced from ½ oz. to ¼ oz. Also that rations for troops should be *atta* or rice 2 lbs. instead of 1½ lbs., *dal* 2 ozs. instead of 4 ozs., *amchur* ¼ oz. instead of ½ oz., fuel 3 lbs. instead of 1½ lbs. Commanding officers of corps have a great tendency to advocate a more frequent issue of meat,

Vide note at end of this paper.

that is to say, some suggest 8 ozs. meat, three times a week, and others 4 ozs. meat daily (including

G. S. W.

bone) when locally procurable, but it seems to me a matter for consideration whether this might not lead to difficulties hereafter and whether extra issues might not be made on payment instead of free, if the men want more than the authorized quantity.

Rum, tea and sugar.—There is also a great tendency to supply the men with rum, while tea and sugar are not much in request, some commanding officers recommend a more frequent issue of rum, tea and sugar, but they ought to know that extras are issued at the direction of the General Officer Commanding the force.

36. *Repairing material for clothes, boots, &c.*—The officer commanding King's Own Yorkshire Light Infantry recommends that the commissariat should take material for repairing clothing and boots on field service, but the regulations are that every corps should have a tailor's and shoemaker's shop in good working order, and consequently ought to have all the necessary articles for repairs in hand, so as to be able to take a sufficiency on active service as required.

Treated of in report No. vii, Field Service Equipment Tables.

G. S. W.

37. *Forms*.—Forms of receipted indents contain fuel and fodder which are seldom issued, and this leaves openings for fraud on the part of agents.

This could be arranged departmentally when occasion calls for the alteration suggested, which in ordinary campaigns would be the exception.

G. S. W.

QUETTA ;

12th February 1891.

J. R. BURLTON-BENNET, Lieutenant-Colonel,

Chief Commissariat Officer.

Remarks of Major-General Sir George White on the above report.

With reference to paragraph 16 of this report, nearly all the commanding officers have brought to notice the unsatisfactory arrangements made for feeding the camel-men in the more remote districts where there were no bazars. It was arranged that the civil should carry food for these men. The camels had all been engaged by the Agent to the Governor-General through large contractors who received pay for all and had large advances made to them.

Pay and food of camel-men.

The system did not work well as the actual camel owners and attendants often complained of not having received their proper share of these advances, and that they were without the means of getting food even when they had funds to pay for it. I think that the best plan would be to pay the actual camel owners and that these and the *sarwans* should be fed by the commissariat who have the chief interest in keeping them contented in situations, such as the Kundar valley and Sherani hills, where arrangements must be made to carry food for them.

With reference to paragraph 35 I think that during a campaign in a cold climate the native fighting man's rations should be—
Field service rations for native soldiers and followers.

2 lbs. flour.
2 oz. *ghi*.
2 „ *dal*.
3 lbs. firewood.
8 oz. meat, 3 times a week when procurable.
 $\frac{1}{2}$ oz. *amchur*.
2 oz. *gur*.

Remainder as at present. Tea and rum when ordered by General Officer Commanding as at present.

The followers' ration should be :—

Followers' rations on service.

2 lbs. *atta*.
2 oz. *ghi*.
3 lbs. firewood.
 $\frac{1}{2}$ oz. *amchur*.
 $\frac{1}{6}$ oz. chillis.
 $\frac{1}{8}$ oz. turmeric.

At present the follower gets no *masala* and his food is consequently unpalatable and gives him dyspepsia. Rice should not be forced on troops not accustomed to it, as they do not understand how to cook it, and consequently it makes them ill.

I do not approve, as a general rule, of issues on payment to soldiers on service. The ration should be free and sufficient to maintain men in the highest health. I do not include tobacco in this prohibition, which, in the absence of local markets, should be procurable by both British and native troops from the commissariat.

The Commissariat Manual should lay down definitely the power of the General Officer Commanding to utilize the services of the grass-cutters of native cavalry regiments to cut grass, carry in fodder, &c.

Government feeds these grass cutters and their ponies on service, and should have a lien on their services for the general good in times of exceptional scarcity of fodder, instead of their working for their own regiment only.

I could find no authority for making them contribute to a general stock, although I did it when I had no other means of providing grass or getting forage for the Government animals.

QUETTA ;

21st February 1891.

G. S. WHITE, Major-General.

ii.—TRANSPORT.

Proceedings of a Special Committee assembled at Quetta on the 19th January 1891, by order of Major-General Sir G. S. White, K.C.B., K.C.I.E., V.C., commanding Quetta District, for the purpose of taking evidence regarding the working of transport equipment, saddlery, line gear, clothing, &c., during the late Zhob expedition.

PRESIDENT.

Lieutenant-Colonel J. R. Burlton-Bennet, Chief Commissariat Officer.

MEMBERS.

Captain P. W. A. A. Milton, King's Own Yorkshire Light Infantry.

Captain J. Monteith, 7th Bombay Lancers.

The Committee having assembled pursuant to order proceed to take the evidence, written and verbal, of fourteen different officers who were on field service in the Zhob district and are considered best qualified to offer opinions on the subject, the President and Members of the Court were also on field service in Zhob and their individual opinions were also considered.

The following is the result of the investigations :—

CAMEL GEAR.

Head-stall.—The camel gear worked satisfactorily with the following exception :—The

I accept this as the experience of those who have had most and best opportunities of judging.

G. S. W.

present head-stall was very unsuitable as the weight of the gag chain dragged it crooked, and was apt to cause damage to the animals' eyes, and as the chain itself is likely to be injurious the

Committee would recommend that another pattern be considered.

Loading nets.—The camel loading nets proved most useful, without these the kits fall

Vide separate note at end of these proceedings.

G. S. W.

off and a lot of time is lost in picking them up and reloading them, this often delays the whole column. If the loads have not been properly

balanced, they are easily adjusted in loading nets and camels are more easily and quickly laden. These nets are also useful for bringing in fodder. The Committee strongly recommend their being much more generally used.

KAHARS.

Kahars are invariably complained of as unsuited for hill campaigns, they caused much delay and obstruction; it is stated that in many instances they could scarcely struggle along with an empty *dandi* much less carry a sick man. Many of these men were mere lads, all were medically examined before they went on service, and some of those medically passed as fit down country, on re-examination at Quetta were considered unfit, and those passed as fit at Quetta were found almost useless in the field.

The Committee are aware that the conditions under which *kahars* have to work on service are not the same as those under which they work ordinarily in peace time, and that they have to carry a *dandi* for a long time at a slow pace, whereas ordinarily they are laid out in stages and run a *duli* at a good jog trot, only a stage, but the Committee recognize the necessity for some sort of *dandi* carriage on service, and would suggest the better training of this class of men in peace time. They, however, recommend that in future *kahars* should be recruited, trained by, and entirely under the control of the medical department in the same way as ward servants and others.

MULES.

Head-stall.—The complaint against the head-stalls is universal, they are generally described as worse than useless owing to their being made of such thin poor leather. The Committee strongly recommend these should in future be made of good double leather throughout.

I have had plenty of instances of what the Committee bring to notice and endorse their views.

G. S. W.

Tarpaulins.—One tarpaulin is allowed for the covering of three saddles, this is cumbersome and has to be folded up and put under a load, and when required for use is found cut through the folds and useless. The Committee recommend that each mule should have one of his own only large enough to cover his own saddle that it should be made of some more pliant material, and that when rolled up it should be passed through the arches of the saddle.

I agree as regards each mule having a tarpaulin, but I do not agree in the recommendation that the arches of the saddle, which are the greatest safeguard, should be filled up with what would often be a hard and crumpled tarpaulin. Pliant waterproof stuff would I fear run the Government into great expense.

G. S. W.

the arches of the saddle.

I agree.

G. S. W.

Ropes.—The Committee are of opinion that all ropes should be of hemp.

Bridles.—The Committee recommend that the present watering bridle should be abolished. That a T bit be used instead to fasten on to the head-stall D's—a rope rein to be used with T bit—a half inch good English hemp rope with a T at one end and a large eye splice covered with leather at the other end. This can also be used for leading, by loosing the T on the off side and fixing it at the full length of the rope to the ring at the back of the saddle of the mule in front; if necessary, this rope could be shortened and knotted. It could also be used in lieu of the forefoot shackle and chain by being used as a picketting rope, by attaching the T through the D in the rear of the head-stall and passing the picketting peg through a loop formed through the eye splice.

I accept this recommendation as proceeding from practical men.

G. S. W.

leather at the other end. This can also be used for leading, by loosing the T on the off side and fixing it at the full length of the rope to the ring at the back of the saddle of the mule in front; if necessary, this rope could be shortened and knotted. It could also be used in lieu of the forefoot shackle and chain by being used as a picketting rope, by attaching the T through the D in the rear of the head-stall and passing the picketting peg through a loop formed through the eye splice.

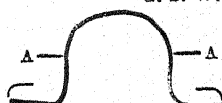
Saddle.—The Committee recommend a return to the old pattern ordnance saddle with breast-piece breeching and crupper with chain attachments—the new pattern without cruppers and with thongs has been found by every one who used them a complete failure—the thongs were continually being lost and broken and were generally carelessly knotted by the drivers, causing the loads to shift, and without a crupper the saddle rises and the breeching works up to the animal's tail, cuts it, and causes unsteadiness and throwing of loads, and suffering to the animal.

I also agree in the reality of the disadvantages here shown.

G. S. W.

I hesitate to recommend this.

G. S. W.



A. iron stop.

Shackles and chains.—The Committee have already shown how the forefoot shackle and chain could be abolished, under the head of "bridles" above; they now recommend the abolition of the hindfoot shackle and chain which are difficult to repair in the field, are heavy to carry, require constant repair, and necessitate a good deal of extra weight in bar iron, &c., being taken into the field for repairing purposes. They are also dangerous if an animal happens to break loose with shackle, or shackle and chain attached to him. The Committee would recommend in lieu a good hemp rope with the ordinary leather shackle known as *mozumnah*.

I concur.

G. S. W.

Pegs.—The present pattern iron peg seems satisfactory.

Jhuls.—The present commissariat pattern *jhul* made of *laut* (stout canvas) lined with blanket was found satisfactory as it kept in good order and was not eaten by the mules, whereas the shaped blankets used by the Mountain Battery Royal Artillery mules soon became unserviceable, and were eaten by the mules themselves or their neighbours. The Committee recommend the commissariat pattern for universal adoption.

I fully concur in the note on *jhuls*.

G. S. W.

Tents.—The present tent for commissariat and transport followers is too large and when small parties are detached they either have to go without shelter altogether, or have an unnecessary large amount of accommodation, while others have none. Recommended that the ordinary native cavalry sowars' tents be substituted, which would accommodate six men in each, are easily

I concur in this recommendation. The transport followers have often to move in small parties over very exposed ground during the rigor of a Baluchistan winter, and these small parties ought to have the shelter of tents or a tent.

G. S. W.

carried, easily pitched, even on bad or broken ground, and can be placed in positions where larger ones cannot.

One tent of this description should be allowed to each *salutri* for himself and his medicines, &c.

KITS.

Kits.—The authorized weight of baggage for commissariat and transport followers is

The guiding should be that the follower be clothed up to the full climate requirements of the country he is to work in, and the true weight of such necessary clothing and bedding to match should be allowed and calculated in the transport required.

The followers are not sufficiently considered on service, and I think the economy a short-sighted one.

G. S. W.

10 lbs., whereas the actual weight of their authorized baggage in cold climates is found to be from 27 to 30 lbs., this causes necessarily overloading of transport animals. The scale should therefore be revised, and the Committee recommend it should be fixed at 27 lbs. or 6 kits to a mule.

Cooking pots.—The Committee are of opinion that the different kinds of cooking pots for various castes should be authoritatively laid down in detail, and be strictly adhered to. The tin water bottles do not hold enough, and the Committee recommend small *chagals* in lieu.

I think there would be a difficulty in systematizing amongst followers to whom I presume it refers, and *chagals* would leak, sweat and make a mess over the followers carrying them. The water bottle is better than the pattern issued to the British soldier.

G. S. W.

HIRED TRANSPORT.

Feed and pay.—The Committee consider that when the officer commanding the camp

In the Zhob Field Force the political department undertook to feed the camel-men. They often were unable to do this and the camel drivers either deserted, were much discontented or had to be fed by our commissariat. I think it would work better if the department using the camels were to feed the camel-men in remote districts where they have no opportunity of supplying themselves.

G. S. W.

considers it necessary for the efficiency of men and animals that either or both should receive rations in kind, the issue should be on payment and compulsory.

Spare ropes.—The Committee recommend that one of the spare mules with baggage guard, should be equipped with some spare rope, twine and picks and hatchets, to enable breakages to be repaired, loads re-adjusted and fastened, and obstacles cleared along the route.

(Sd.) J. R. BURLTON-BENNET, *Lieut.-Colonel,*

President.

(Sd.) P. W. A. A. MILTON, *Captain,*

King's Own Yorkshire Light Infantry.

(Sd.) J. MONTEITH, *Captain,*

7th Bombay Lancers.

Members.

Countersigned.

G. S. WHITE, *Major-General,*

Commanding Quetta District.

Remarks of Major-General Sir George White on the above Proceedings.

Loading nets.—Loading nets are most useful with nearly every description of loads, but especially so when the loads are made up of numerous small parcels, such as light kits. The labour and irritation caused to a baggage and rear guard by the constant falling off of such articles is great, and the load arrives in anything but a compact form. At night articles work from under the ropes and are lost. All this is avoided by having strong nets, and when the ends of these nets are tied up the load must ride compactly, safely and high up on the camels back. The Arabs on the upper Nile, who take the greatest care of their camels, use these nets very generally.

Kahars.—The *kahars* that now take service are almost useless in time of difficulty. The *duli* or *dandi* is, however, obligatory until we get a substitute suitable for a lying down case. The race of *duli* bearers that was so efficient has disappeared before carriage and railroads. The Committee appear to consider that the carriers attached to the ambulance transport are professional *kahars*, but that the conditions under which they carry their loads with a field force are more trying than those of an ordinary *duli dāk*. I do not believe that most of the bearers entertained are professional *kahars*. The Committee recommend that the *kahars* should be recruited, trained by and always attached to the medical department under conditions similar to those of ward servants. I would gladly see this recommendation carried into effect, but I fear that it would in ordinary times keep too many hands idle, while extra establishment would have to be entertained by the commissariat to do the work now done by the *kahars*. I therefore hesitate to recommend the measure on economical grounds; but I consider it absolutely necessary that the *kahars* should be more practised at their legitimate work than is the custom now: that eight men should be told off for each *dandi*, and that on service the *kahars* should receive fighting men's rations. In the Zhob Field Force, where the marching was over difficult mountainous ground and waterless tracts, the following description was given of the ambulance transport, and was an exaggeration in degree rather than inapposite in principle:—"The *dulis* were packed on camels, and made awkward loads; the effete bearers rode the mules provided for the sick fighting men, and the sick fighting men walked."

QUETTA;

10th February 1891.

G. S. WHITE, Major-General.

P.S.—In addition to what I have written above, I recommended that a General Order be published, prohibiting unjointed tent poles and beds being carried on mules. Many officers still have them.

When compressed fodder is carried on the line of march, as was necessary during the Zhob expedition, 1890, the bales should be packed to resist greater wear and tear by the way. The thin canvas with which these bales are now covered bursts after a fall or two. At the end of every day's march they are tumbled on to the ground. Compressed fodder is only required where there is no indigenous forage for horses and mules and must be carried on camels who soon learn to supplement the scant camel-grazing by an indent on the bale carried by the camel in front of each, effecting an entrance at the broken corner.

G. S. W.

iii.—VETERINARY.

Report by Veterinary Surgeon J. G. O'Donel.

I have the honour to forward for the information of the Major-General Commanding the following report in connection with the military operations of the Zhob Field Force, 1890.

On the 20th September 1890, I received instructions from the Assistant Adjutant General, Sind District, to proceed to Quetta forthwith to inspect all the mules about to proceed with the expedition, I proceeded to Quetta next day, and on the three succeeding days I inspected all the transport mules as well as those of the Royal Artillery and Sappers and Miners. I was then ordered to proceed to Loralai to inspect all the horses of the 18th Bengal Lancers, and the transport mules about to proceed with the column from that station, and afterwards to accompany the force from Loralai.

I shall arrange the subjects of this report under their different headings.

Horses.—The number of horses employed on the expedition was very small, only 273 of 18th Bengal Lancers. On inspecting them very carefully, I found them all free from disease (although a short time before a supposed case of anthrax had been reported, of which the horse died), the horses were in excellent condition, their feet in good order and properly shod.

I was with the 18th Bengal Lancers during the whole of the expedition as well as being in charge of the transport mules, and during that time, considering the length of some of the marches, and the nature of the ground traversed, it would be impossible to find less sickness or accidents among the same number of horses. There were 5 deaths, one from colic, one from heart disease (hypertrophy of the heart), one from exhaustion, and two that died while away from head-quarters, which I never saw, but from the symptoms described to me by the squadron commander, Captain Money, I am of opinion that the horses died either of heart disease or congestion of the lungs, both of them dropping down dead very suddenly. The horse that died from exhaustion was out from early morning until late at night, and had been going at a fast pace most of the day, another horse of this troop out on the same day's work was so ill that he had to be left about six miles from the camp, as the officer in command

was of opinion he was dying; the next morning when he sent out to see him, the horse was found alive, so he was with much difficulty brought into camp, and when I examined him I found he was suffering from congestion of the lungs; after applying suitable remedies he gradually recovered, and was afterwards discharged cured. There were a few shoes torn off the feet and about a dozen slight sore backs caused by this long day's work.

During the two months it was surprising to find how few horses suffered from sore backs, colds, or injuries; there were not more than half a dozen kicks among the horses, and losing a shoe was a very rare occurrence, there were a few bruised feet occasionally owing to the rough nature of the ground, there was an entire absence of girth galls and very few cases of fever or colds, taking the variations of the climate into consideration. Although a number of the horses showed signs of hard work and had got thinner, especially during the last ten days of the march to Loralai, owing to the severe rainy weather experienced, still they were in good hard working condition, and on arrival at Loralai there was not a single medical case under treatment, and only nine surgical cases, all of a very slight character.

Mules.—At my inspection of the mules at Quetta about to proceed on the expedition I found them all free from disease, the mules shown to me as belonging to the Quetta command, were in good condition, but a number of mules sent from Peshawar and Rawal Pindi were in very poor condition, very small, and seemed quite unfit for transport work. The ones from Rawal Pindi were the worst, I understand that instead of taking these animals it was decided to take some of the mules from the Quetta command which had been cast "as old and worn out."

Owing to the mules having been sent with the different columns it was quite impossible for me to keep a correct account of the number of animals under treatment, but whenever all the columns were encamped together I had an opportunity of examining nearly all the transport mules, and was surprised to find so few of them laid up: on the 18th November I inspected all the mules with two columns; prior to the breaking up of the expedition, and out of a total of 320, I found only 8 unfit for work, six of them suffering from sore backs (saddle galls), one from congestion of the lungs and one from contusions, the result of a fall down a precipice. There was practically no sickness amongst the mules, with the exception of a few cases of ordinary colic.

At my final inspection of the mules at Loralai I regret that, although the cases of sickness was still very small, the number of sore backs had increased, as out of a total of 526 mules, I found 60 of them with sore backs (saddle galls). I attributed this large number to the severe rainy weather experienced during the later marches to Loralai, the saddle pads getting very wet and the ground extremely heavy; in some places the mules were up to their knees in thick mud, and the weight of the tents, &c., carried was, of course, greatly increased, owing to the continuous rain. There was no inconvenience in the transport, although mules were put out of work, as there was a sufficiency of spare mules to take the place of those on the sick list.

Camels.—Only a very small proportion of the camels taken on the expedition were Government animals, the remainder being hired. I did not inspect these nor were they, as far as I was aware, in any way in my charge, although sometimes I advised as to their treatment, but no arrangements for medicines having been made for the use of such camels, and the camelmen preferring their own way of treating them instead of following my advice, it was impossible to treat them.

On the return march to Loralai, I noticed that the majority of the camels were in poor condition, some of them being very weak, owing to long marches and insufficiency of feeding, besides this a large number of camels were very small and too young for such hard work. I might here point out that in my opinion when a contract is being made for camels for such an expedition it would (if it could possibly be arranged) be a good way for the transport department to make it a part of the contract, that a certain sum *per mensem* be deducted from the owners and that the department arrange for the proper feeding of the camels, this would ensure their being fed and also reduce the number of camels out of work and lower the mortality amongst them, as I understand that compensation is given in case of camels dying. Eleven Government camels were inspected with mange, while camped in Apozai, but it was not of a severe type.

I do not concur with this. If the camel owners felt they could draw on the commissariat for camels' food, it would increase immensely the amount of grain, &c., to be carried.

G. S. W.

Compensation for camels that died was no part of the contract. It is patent that any such clause in a contract would be an inducement for camel owners to bring old worn out, or very young camels that would die, and get them more than their value in compensation. I specially barred this system of compensation.

G. S. W.

Five Government camels had to be destroyed for necrosis of the vertebra, the result of saddle galls.

Water.—The water met with on the expedition was in most places of a good or fair quality, in some places it was impregnated with salts, notably sulphides of magnesia, which had the effect of causing thirst and slight diarrhoea in some of the animals, but the arrangements for watering the animals could not have been better, and to this I attribute the fact of the animals keeping their condition so well.

Forage.—The forage supplied to the animals consisted of ground *gram* and barley at first, afterwards whole *gram* was supplied; compressed *bhusa* of an excellent quality was also supplied, and good grass and *kirbi* whenever it could be secured; the horses seemed to like the hill grass which was procurable in a number of camping grounds. Salt was also regularly supplied to the animals.

Contrary to my expectations no ill effects of giving whole *gram* to the animals occurred, but the precaution of always mixing it with some fine *bhusa* was taken; this in my opinion prevented a number of animals from getting colic or indigestion, so often met with when whole *gram* is used for feeding.

Saddles.—The saddles used consisted of the riding *sunka* and the pack of the Government pattern. The *sunka* saddle was mostly used by the 18th Bengal Lancers for their transport mules, it seemed to suit well, except that in hilly country the loads sometimes shifted, and a separate driver was required for each mule, instead of one driver for two or three mules loaded with the pack saddle.

The horse saddles used by the 18th Bengal Lancers were of a good pattern, padded with strips of *numdah*, which could be removed at any time; and lined with leather instead of serge. It has two great advantages—1st, being able to cut out a piece of *numdah*, if the saddle touches any part of the back, thus taking the weight off the part; and 2nd, the leather lining does not wear out easily as would be the case with serge. And the only disadvantage I could see is that the leather has to be kept properly cleaned, if not, it is liable to get hardened, but I never saw a case of this. There is one fact I should like particularly to bring under notice whilst on the subject of saddles, namely, that whilst inspecting the mules of No. 7 Mountain Battery, Royal Artillery, I was surprised to find a great number of the mules of the battery suffering from severe wounds on the backs, almost all of them situated on the arch of the ribs on the near side. I was for a long time puzzled, as I could not account for this being the case; first it was thought it was due to the *dhandas* sticks tied on from the head collar to the near side of the body roller. It seemed impossible that this would cause it, but on fitting on a couple of saddles I found that the girths appeared to be too long and the saddle being always girthed on and tightened on the *near* side, the large buckles of the girth on that side went too high up in some places, reaching to the arch of the ribs, consequently unless there was a good amount of stuffing of the pad at this spot, after a few days' work the buckles caused a soreness of the skin and a sore back, or more properly, a sore side,—hence, in my opinion, the number of sore backs found in the mules of the Royal Artillery out with the expedition.

Captain Wickham of the commissariat department informed me since my return, that in Afghanistan a number of mules were found to be suffering from sore sides, principally the *near* side and that after careful investigation it was found that the continuation of the arch of the saddle front and rear so pressed on the sides as to allow of no motion of the saddle, and a bulging of the skin and muscles between the continuations of the arches was caused, so that the buckles pressed on the sides in this particular place and caused the wounds. After that Mr. J. Anderson, late Inspecting Veterinary Surgeon, Bombay Army, recommended that the wings of the arch of the saddle be cut off high up; but in any case if the girths are too long and being always tightened on the *near* side would, I think, be quite sufficient to cause any such sores as I have described.

Medicines and Instruments.—As soon as I received orders to proceed with the expedition I telegraphed to the Chief Commissariat Officer, Quetta, for the number of mules I required for transport for medicines and instruments; at the same time saying that on arrival in Quetta I would select medicines, &c., required; on arrival I gave this list as well as saying what necessities ought to be taken. I then went to Loralai, and on meeting the force from Quetta at Toi War, I received the permission of the Chief Commissariat Officer to take over and keep in my own charge, one medicine chest with a few medicines and instruments which I could use in case I was called out suddenly, or at night.

When I went to select the medicines, &c., at Toi War camp I found six veterinary medicine chests in charge of the transport, but very few of the medicines I had previously asked for. One end of each chest was fitted with small partitions for carrying small bottles, but there were no small bottles in any of them, there were some large bottles containing medicines in one or two of the boxes, but some of the bottles were so tall that they had to be packed lengthwise instead of standing upright, as in the latter position the lid of the boxes could not be shut; there was a lot of useless medicine taken and the medicine required could not be found.

I will give an instance of a few things omitted by way of explanation:—

Taken—

1 large iron mortar and pestle (half a load for one mule).

5 or 8 balling irons.

About 1 maund chiretta.

” $\frac{1}{2}$ ” catecha.

” $\frac{1}{2}$ ” alum

” $\frac{1}{2}$ ” gur.

Not taken and indented for—

Potass Nitrass.
Small scales and weights.
Argent Nitrass.
Small mortar and pestle.
Gentian.
Sponges.
Towels.
Bandages.

And very little of the most useful medicines. I had several times to get some medicines from the officer commanding the 18th Bengal Lancers. On the 28th October at Apozai I was informed that the medicines, &c., I had applied for had been *sanctioned* and would probably be sent out to me, but I never received them.

I am, of course, fully aware of the short notice (two days) in which the things should have been procured, but it would be advisable to have veterinary medicine chests complete with bottles, &c., ready for use on short notice.

I need hardly point out the difficulty of making up the medicines without a mortar and pestle, and the trouble of having to borrow weights and scales from the 18th Bengal Lancers every time a *dose of medicine* was required.

General remarks.—Owing to the force being so often divided, it was impossible to keep such strict supervision over the animals as one would have wished, but fortunately there was no outbreak of disease of any kind. For days at a time numbers of mules were away on duty in charge of sergeants of the transport department. There were three *salutris* of this department with the expedition, they carried out their duties fairly well, but there was the usual difficulty in getting them to dress wounds properly, such as clipping off all the hair round the wounds and keeping wounds clean. The sergeants in charge of the mules seemed to me to take every care of them and were very careful in reporting every case and doing their best to carry out my instructions.

The *salutri* of the 18th Bengal Lancers appears to be an exceptionally good man at his work, and carried out my orders most carefully, and I might mention that he was always ready to do any work for me outside his regimental duty. The officer commanding his regiment kindly allowed him to do so, as I had to do all the work myself which usually devolves on the sergeant farrier and shoeing smiths. I would respectfully bring to notice that there were from 150 to 200 officers' chargers on the expedition, and for this number of animals I had no assistants to help me in administering medicines or looking after cases in my absence, and I have had a large number of complaints about officers being unable to have their horses shod. Although they carried their spare shoes with them, the *nalbands* of the 18th Bengal Lancers were unable to shoe half the number of officers' horses sent to them to be shod, without the shoeing of the horses of their regiment being neglected, which the officer commanding naturally took care should not be the case, consequently a number of officers' chargers had to go for a long time without being shod. Through the courtesy of Major Richardson, commanding the 18th Bengal Lancers, I was able several times to have lame horses belonging

The shoeing of officers horses is always a difficulty, and leads to great inconvenience on service.

G. S. W.

to officers shod, otherwise the horses would have been useless to their owners for riding. I would respectfully suggest, to meet the requirements of the department on active service, the establishment of a small Veterinary Staff Corps, as from experience gained on this expedition, I am confident that had there been an epidemic of disease, a single veterinary surgeon without any assistant whatever would be quite unable to cope with it.

KARACHI ;

23rd December 1890. }

J. G. O'DONEL,

Veterinary Surgeon, A. V. D.

Remarks of Major-General Sir George White on the above report.

I concur fully in this report.

G. S. W.

iv.—MEDICAL.

Report by Deputy Surgeon-General S. A. Lithgow, C.B., D.S.O., Principal Medical Officer.

With reference to District Order No. 1044, Zhob Field Force, of 9th instant, I have the honour to submit the reports and suggestions as under :—

Establishments of field hospitals should be handed over by the commissariat department complete a week before the time fixed for their departure in order to enable the medical officer in charge to draw and dispose of the necessary equipment and get the hospitals in proper working order before starting. The night before starting, as was the case in most instances, caused much inconvenience and trouble.

I concur.

G. S. W.

Duties of commissariat sergeants attached to hospitals should be better defined. At present they do not appear to be sufficiently under the control of the medical officers in charge. They are liable to be removed by the commissariat department just when they have got their "hands in." They should not be liable to be shifted as they are.

I accept this where practicable.

G. S. W.

The men supplied as tent lascars to hospitals were not of that class and did not know their work. This should be remedied.

I concur.

G. S. W.

The boxes of carpenters' tools were supplied with tools whose edges were useless, a better quality is necessary.

I concur.

G. S. W.

Some good axes for cutting wood, if supplied to each hospital, would often have proved most useful.

I think this essential.

G. S. W.

Ropes for hospital latrine screens are not sanctioned in Field Service Manual, Medical. This omission should be remedied as the ordnance department will not supply them otherwise.

I concur.

G. S. W.

Iron tent pegs should take the place of wooden ones, and with them should be supplied iron mallets of the pattern issued to transport drivers. Those with iron heads and wooden handles are always coming to grief.

Yes; for a mountain campaign where the ground is hard.

G. S. W.

Kahars were generally of bad physique, untrained to the work, and but a very small proportion of them belonged to that caste at all. For these several reasons they were quite unequal to the work demanded of them. Six men had enough to do to carry an empty *dandi* on most of the marches. For mountain warfare, in which long marches over steep passes, along rocky beds of rivers, and strips of heavy, sandy and stony deserts, form the prominent features, 8 men per *dandi* are the least that should be allotted. They from the nature of their work require a "fighting man's" ration as much, if not more than the sepoy does.

I fully endorse this view from experience in several campaigns of late years. The *duli* or *dandi* is obligatory and 8 bearers are required for each. These men should have fighting men's rations.

G. S. W.

Ambulance riding saddles are not comfortable and slide about, causing in one instance a severe fall to a patient. The ordinary riding saddle or some modification of it seems more desirable.

I agree.

G. S. W.

Mule transport for field hospitals wherever mule ambulance transport is in use should be the rule. Camels arrive in camp usually hours after the sick, and in some instances of long marches and bad roads, not until late at night. In this way the sick are liable to suffer exposure, and delay in getting their accustomed food to an injurious extent.

Mule transport for all baggage of the hospital would greatly increase the number of animals for which grain rations, and even sometimes compressed forage have to be carried. A proportion of mules can nearly always be given to the hospital and things most urgently required can be conveyed on them.

G. S. W.

Rations.—A more liberal issue of meat in cold climates when combined with fatiguing marches seems desirable for native troops. The camp followers generally under similar circumstances should get an increased ration. For the *duli* bearers I consider this a necessity.

I concur, and have treated of this subject in my remarks on the Chief Commissariat Officer's report.

G. S. W.

Alum for purifying water would often be very useful. This might be made an obligatory article with corps units, to be left in charge of company cooks.

The hospital storekeeper's relation to the medical officer in charge of a field hospital and the relative responsibility of each in the matter of hospital equipment seem to require defining better. Paragraph 593, Army Regulations, India, Volume VI, has been considered by one medical officer affected, to be in conflict with paragraphs 162 and 163, Field Service Manual, Medical, inasmuch as hospital storekeepers when attached to station hospitals are responsible for the whole equipment of the hospital not in actual use there, and for those so in use only does the medical officer in charge grant receipts; whereas by the paragraphs 162 and 163 above quoted, in a field hospital the medical officer in charge is required to give receipts for the whole.

I think on service all authority and responsibility should be given to the medical officer in charge of the field hospital.

G. S. W.

Under the latter circumstances, if the responsibility of the medical officer is unquestionable, the hospital storekeeper should be directly under the medical officer in charge, and should not be removed by the

commissariat department without reference to him. There were some complaints on this last head during the expedition.

QUETTA;
31st December 1890. }

S. A. LITHGOW,
Deputy Surgeon-General.

V.—ORDNANCE.

Report by the Ordnance Officer, Quetta District.

With reference to District Order No. 1044, dated 9th December 1890, I have the honour to report as follows:—

Under District Orders the corps detailed for the Zhob Field Force submitted requisitions for the stores authorised for field service.

It is presumed that telegraphic orders for mobilization would be sent simultaneously not only to the army under the orders of His Excellency the Commander-in-Chief, but also to all departments, including the ordnance department, under the Government of India, which department could then comply at once with all authorised demands from corps for stores for field service. It is suggested that when mobilization does not take place, but only a small force or expedition is ordered, telegraphic orders be also simultaneously sent to departments whether field service stores are or are not to be issued to the corps composing such force or expedition. For want of such orders countersignature on the sole responsibility of the General Officer Commanding had to be applied for on requisitions from corps, though I took upon myself the responsibility of issuing all stores at once to avoid any delay.

2. Corps are ordered on mobilization or when warned for field service to submit emergent requisitions for stores to complete them to war scale and to replace any condemned. In the case of all authorised demands I beg strongly to recommend that the words "emergent" be omitted as it entails the submission of the requisition to the officer commanding the station for his countersignature, thereby causing apparently unnecessary delay, taking up the time of the officer commanding the station at such a time and practically making merely a post office of the station staff office. Such requisitions might well only be ordinary ones with "urgently required" entered in red ink in the column of remarks with "on mobilization" or the name of the force or expedition. The stores being already authorised by requisitions could be passed at once by the arsenal without further

I concur in these recommendations.

G. S. W.

correspondence.

3. The table of tents allowed on page 5 of the Field Service Equipment Tables, 1888, Section I, Staff, does not show which are to be supplied at the cost of the State. This also applies to the tables of tents throughout the other sections.

K. S. DUNSTERVILLE, *Captain, R.A.*,
Ordnance Officer.

vi.—EQUIPMENT.

Note by Major-General Sir George White.

The water bottle supplied to British troops is most unsuitable, and a great deal too small for a dry waterless country like Zhob or Afghanistan. It is the very worst pattern I know.

The axes issued by the commissariat for cutting wood were of most inferior quality. Axes should be issued to corps; none are provided by the Field Service Equipment Tables. On several campaigns I have found that the axes become useless in a very short time and I think that the very best American axes should be supplied.

The Cawnpore ammunition boots were found to last much worse than the English made ones. The soles of the former come away from the welts. All boots to last in a rocky stony country should be "hobnailed," such as, I believe, are issued occasionally at home. The time a hobnailed boot outlasts the ordinary ammunition boot must be learned by experience to be believed.

The head-stalls issued for transport mules were found throughout to be made of such inferior leather as to be quite unserviceable.

Lanterns brass globular of mountain battery proved quite unserviceable. They are so fragile that the movement of a mule pack load shakes them to pieces.

Sickles.—Only 60 are allowed to a mountain battery, 90 were found barely sufficient. I recommend an increase of 30.

In a country where water is scarce like Zhob and Afghanistan, and camps are often unavoidably a considerable distance from water, and marches are very long with not a drop of water on the road, spare mule *pakhals* are very desirable, say 1 pair extra per 100 men. The pawlins, harness and magazine issued to mountain battery cracked and become quite unserviceable after a few days use. Those issued to the transport department are far superior.

The provision of a certain number more small tents to regiments of native infantry for the use of small escorts and guards is essential. *Havildars'* guards of, say, 12 men are frequently detached. If five tents to hold 12 men each were introduced as part of the regimental camp equipage corresponding arrangements could be made regimentally for cooking pots

G. S. Single Fly, 80 lbs. for that number of men. This would conduce greatly to the comfort and compactness of smaller detachments and escorts for whom no suitable arrangements now exist.

vii.—FIELD SERVICE EQUIPMENT TABLES.

Note by Major-General Sir George White.

Provision should be made for the issue of pack-saddles, line gear, &c., for the 87 Government grass mules permanently attached to Bengal cavalry regiments (A. G. No. 3819-B. of 30th September 1889).

Now staff offices are supplied by Government, provision should be made for the issue by the ordnance department of office tent, and camp furniture, such as tables, chairs, lamps, mule *kajawaks*, &c. Also for office stationery, note-books, diaries, portable inkstands, typograph, &c., and it should be laid down whence such are to be obtained.

Several articles classified under the head of Miscellaneous in pages 7, 8, 9 of Field Service Equipment Tables of 1888, Section VIII, require further specification as to source of supply.

If regiments are to supply soles and other articles for repair of boots from their shoemakers' shop, they will require an allowance of carriage for the same. The same applies in a modified degree to the tailors' shop, but boots are the chief essential in a campaign.

In case these supplies require replenishing at the front the commissariat department should supply carriage for the materials for mending that would be required by the artisans in these workshops.

II.—Report on the working of all arms.*

A great advantage was derived in this campaign from the reduction of followers consequent on making the British troops cook and do nearly everything for themselves. No followers were required for them except *beldars* and *mehtars*, who performed the menial duties of conservancy, which, while serving along-side of native troops, it is inadvisable for the British soldiers to do for themselves.

I was fortunate in the matter of road-making in having under my command the King's Own Yorkshire Light Infantry, a battalion largely composed of men of the labouring classes. I always aimed at piece work, and apportioning the work to the several corps by a system of petty contracts. This I have found to be the surest and quickest way of getting work done in all campaigns of which I have had the direction.

The operations entailed upon officers and men exertions and exposure of an exceptional kind. During the two months about which the Zhob Field Force was in the field its columns marched on the aggregate 1,800 miles; of this distance 828 miles was over new routes which had never before been followed by a British force, and to traverse which the troops had often to make their own roads. The character of the country, in some instances, prevented the use of transport animals; the men had then to carry bedding, rations and cooking-pots for themselves and to sleep without tents with from 13° to 20° of frost.

The marching was always over rocks and stones and often in river-beds where the water was frequently one or two feet deep.

I cannot speak too highly of the cheerfulness and good spirit with which all hardships and privations were undergone by all ranks, both British and native.

QUETTA ;
9th March 1891. }

G. S. WHITE, Major-General.

* Attached to this were separate reports by officers commanding corps. These with the exception of that of the Commanding Engineer are not printed.

Report on Engineering Operations connected with the Zhob Field Force, 1890.

The engineer force with the column consisted of four officers and one company of Bombay Sappers and Miners. The troops moved so rapidly that there was never occasion to construct huts and for the same reason no civil labour was employed on work.

At most of the camps a few sappers were employed in improving the water-supply and communications, and in a few cases, such as the camp at Mogal Kot, to which there was a sheer ascent of 700 or 800 feet, the sapper labour was supplemented by that of working parties of infantry.

On the march a small detachment of sappers generally accompanied the advanced guard and were constantly employed in removing boulders and otherwise improving the roads, so as to enable the main body and baggage to follow. Where, as was often the case, there was no road, tools were taken for the infantry portion of the advanced guard to assist in clearing the road.

The sapper company was generally divided into two half companies, one with each of the main columns. Tools for about 300 men in addition to those with the sapper company were taken on mules during the first phase of the operations, and a large reserve of explosives and more tools were sent to Apozai, to be made use of as required during the second phase of the operations.

As it was advisable to keep down carriage to its lowest limit and the work to be done in road-making was heavy, the working parties of infantry were generally employed in short reliefs of from two to four hours' work, so as by frequently changing the men to get the greatest amount of work out of them with the fewest number of tools. During the latter part of the operations the necessary repairs to tools were carried out at night by the sapper workmen. By this means it was often possible to employ over 1,000 men on working parties during the day.

Besides the ordinary road-making, which was heavy and constant, at two places the work was exceptionally difficult, *viz.*, at the Chuhar Khel Dhana and at the Vihowa pass.

At the former the whole force was detained while the road was being made practicable through a narrow rocky defile between three and four miles long, blocked up in places by huge boulders and with a strong stream flowing through it.

The 3rd Baluchis, three-quarters of the battalion of the Yorkshire Light Infantry and half the company of sappers were employed on making this road constantly for five days, and small parties in keeping the road open after it had been once made.

The work was exceptionally heavy, but officers and men worked with a wonderful will and with intelligence, requiring little supervision when once it was explained to them the nature of the work required. It was a most fortunate thing that both here and at the Vihowa the water was warm owing to the presence of sulphur springs, or it would have been impossible to have got through so much work with the men constantly in and out of the water.

In the Vihowa pass the work was not so heavy, but there being constant rain the flood water was very strong, and there was considerable risk of the men being carried away sometimes.

In the last *tangi* through which the column passed, which was only 300 or 400 yards long, the men worked in one-hour reliefs so as to get through in the intervals between the freshets.

The passage of these *tangis* in the floods was so difficult that at one time, after it had been constantly raining for two days, it became a matter of serious consideration whether the column would not have to retrace its steps and try the *kafila* route over the mountains which had been diverged from two marches back.

QUETTA ;

16th March 1891. }

J. F. GARWOOD, Major, R.E.

III.—Report on tactics adopted, special system of marching, arrangement of troops for ensuring rapid pacification of the country, lines of communication, &c.

As regards the working of all arms as tactical units, the experience of the Zhob Field Force provides no information for future guidance.

On the line of march each unit was kept complete in itself, the following order being observed :—

Reserve ammunition on mules, *pakhalis*, hospital *dandis* and panniers and stores following the rear of each unit.

The force was almost invariably divided into several columns with a view to facility of supply, reduction of the length of the baggage column, learning as much geography as possible, and extending our political influence as widely as my opportunities would admit.

Great advantage was derived from keeping these columns, which were always of considerable strength, together, and not offering the bait to fanatics of small detached parties.

With regard to the operations to subdue the Sheranis, I have always found that a knowledge of the exalted ideas which mountain tribes entertain of the inaccessibility of their hills is most useful.

The great thing is to get above them and to intercept their retreat and the withdrawal of their flocks and herds by the occupation of all main lines of retreat with detachments used as "stops."

With this object in view, one of my columns climbed the Maramazh hill, which commands Namar Kalan, the principal village of the Sheranis, and which offered great difficulty to the passage of troops without transport. Having surmounted this hill, I held the whole country in the palm of my hand, and the tribesmen had no alternative but to submit.

The principle was adopted of occupying with troops, previous to my advance, Drazand and Domandi, villages belonging to other sections of the Sheranis. This was with a view to containing them, preventing doubtful sections from taking up arms against us, and isolating the Khiddarzais.

QUETTA ;
9th March 1891. }

G. S. WHITE, *Major-General*.

IV.—Report on the difficulties, if any, attending the employment of men of different Presidencies, coming under different rules.

No sort of difficulty was experienced. Under the orders of His Excellency the Commander-in-Chief I was allowed to select my own troops. The men composing the two Baluch Battalions, although belonging to the Bombay Presidency were all Punjabis and Pathans, and as such well suited for a mountain campaign.

The men of No. 1 Company, Bombay Sappers and Miners, although not equal in physique to the Baluchis, or nearly so good marchers, yet did most excellent work with the pick and shovel.

G. S. WHITE, *Major-General*.

Appendix K.

REPORT ON SURVEY OPERATIONS.

Report by Lieut.-Colonel T. H. Holdich, R.E., Survey Officer with the Zhob Field Force, on the country operated in during October and November 1890, dated 4th February 1891.

The expeditionary force under the command of Sir George White left the head of the Zhob valley early in the month of October, and was divided into two columns at Hindu Bagh, for the purpose of better exploring the Khaisor valley, and the hills separating that valley from the Kunder. My assistant, Captain Mackenzie, R.E., who, with Sub-Surveyors Shekh Mohiuddin and Asgar Ali, formed the survey party of the expedition, was detached from the force at Shina Khula, and proceeded, with Captain Mason, R.E., of the Intelligence Branch, to the watershed at the head of the Rod by a direct pass northward, for the purpose of taking observations from the Sakir peak, which overlooks the head of the Kunder and the comparatively open tract of country forming the watershed between the Kunder and Arghistan valleys.

Captain Mackenzie having submitted separately (*vide* letters attached) a full report of his proceedings, I need not refer further to his share in the survey work of the expedition than to note that he reached the highest point of Sakir with difficulty, and found it to be scarp-ed with precipices, and so narrow as to render the work of observing a matter of danger, as well as of difficulty. He succeeded, however, in taking a round of horizontal angles to the most important points on the watershed in Afghanistan, and southward, to form the necessary connection with previous triangulation; but he was quite unable to take any observations for altitude owing to the position of the theodolite and his own precarious foothold.

Personally I accompanied the column under Sir Robert Sandeman, which was to follow up Hindu Bagh to Khaisor, by the Rod valley. the lower valley of the Rod and then debouch into the Khaisor plain by a hitherto unexplored pass. This gave me the opportunity of observing the configuration of the hills flanking the Rod, which narrow at one point to a *tangi*, and to explore far enough to form a connection with previous surveys of the upper course of the stream.

The closing in of the hills I found to be quite correctly shown in our maps, but there was nothing really deserving to be called a "gorge," as that word is usually applied to the rocky river gorges so common on the frontier.

The hills are composed of the same formation of clay and sand, admixed with boulders, which forms the prevailing feature of all the lower ridges of these contiguous valleys, and no very great difficulty would be experienced in carrying either a road or railway past them to the head of the Rod valley. No opportunity occurred of carrying a connected line of levels up the valley, and the barometric determinations shown in the map are disjointed, having been determined at various seasons with different instruments, but they are sufficient to show that in all probability a suitable gradient for a railway could be found from the debouchment of the Rod to the head of the Kadanai. Bearing in mind the somewhat unexpected difficulties which were found to beset the Kunder valley route on subsequent examination, it appears to me that a closer survey of the Rod valley by trained railway engineers would be most advisable. If it is ever contemplated to carry a line direct to New Chaman, which will avoid the difficulties of the Khojak gradients and tunnel, I am inclined to think that the Rod valley line may prove the best to adopt.

The pass from the Rod *viâ* Baraksia into Khaisor leaves the valley just above its narrowest point, and follows up a small affluent on its left bank.

From the head of this *nala* it passes over a succession of flattish *raghzas*, or small plateaux covered with stones and stunted grass, to a small local *kotal*, from which there is a steep descent, short but sharp, which leads into the bed of the Sharan Kar (Zhob affluent). A mile or so further is the remote hamlet of Baraksia. Here brackish water was found in shallow wells, and one spring of fresh sweet water.

Baraksia is but a small green spot, well hidden away amongst the low, red, clay hills which fringe the higher ranges between Zhob and Khaisor. Looking forward along the route, there is, on the right front, the massive range of Torghar; on the left, the long rugged line of the Lunda hills, and between them is a low, open mass of rounded hillocks formed by detritus from the higher ranges, through and over which the road passes by easy gradients into Khaisor.

The prevailing impression, carefully fostered by its few inhabitants, is that this part of the country is almost destitute of water. This is by no means absolutely true, for on ascending Torghar to get observations from its highest peak, a fair-sized *kiri*, or blanket village, was observed on the west face of the hill, from which a plentiful supply of perfectly sweet water (derived from local shallow wells) was obtained, to recruit the exhausted energies of *khalasis*

and guides after a severe day's climbing. Immense flocks of sheep and goats were pasturing about the hillsides, where grass was abundant. There can be no doubt that this district is a rich pasture land for the greater part of the year.

From Haodak, our next camp in the Khaisor valley, we moved eastward to Jogizai,* a

Khaisor valley.

settlement at the northern extremity of the Toi pass into Khaisor from Zhob, a route which had meanwhile been surveyed by Asgar Ali, working with Sir G. White's column. The Khaisor valley is a repetition on a smaller scale of the Zhob valley. It is open, desolate and comparatively flat, intersected by innumerable *nalas* from the northern hills, which cut deep into the sandy soil, and devoid of any vegetation except the universal wormwood scrub and tufts of long coarse grass. Occasionally deep beds of sand occur, especially near the bed of the main stream. At China Shor a plentiful supply of water was obtained from the bed of the Khaisor itself, and there was a small amount of tamarisk jungle. The fall of the valley is very gentle, amounting to about 15 feet per mile between Haodak and Jogizai. From Jogizai, without waiting for a junction with the other column, our little force marched northwards to Thanishpa, a rather remarkable village situated near the main pass crossing the 'divide' between Khaisor and Kunder. It was here that the well-known robber chief, Bangal (son of Dost Muhammad), was known to be holding a rock-hidden fastness, from which he was prepared to defy our efforts to dislodge him. However, a reconnaissance by the 18th Bengal Lancers the previous day had sufficed to shake his resolution, and he had retired precipitately on the morning of our arrival to the hills beyond the Kunder, picking up his dissolute old father somewhere *en route*. Thither he was pursued by the 18th Bengal Lancers and some of the levies, but he succeeded in making good his escape beyond the Kunder (which was by Government order the limit of our explorations), leaving some of his baggage (amongst which were a few articles of really valuable loot) in the hands of his pursuers.

Thanishpa, at a height 7,850 feet above sea level, is a picturesque village in the heart of

Thanishpa.

the Bileri hills. It possesses an abundant supply of fresh spring water, which is well utilized for irrigation purposes, the cultivable ground being terraced after the Afghan fashion. This area, however, is but small, being limited to a comparatively narrow strip between high sandstone ridges; but, such as it is, it is in very agreeable contrast to the rugged barrenness of the rocky waste which surrounds it. There are a few almond trees, a few stone-built huts, and a general air of prosperity which is totally absent in either the Khaisor or Kunder valleys. The Thanishpa stream passes by a devious course to the Kunder, running nearly due east. It is below the level of the village, hidden in a rocky gorge. The road from Jogizai to Thanishpa is an open one, running northward across the Khaisor plain till it reaches the foot of the hills, where there are one or two small and inefficient wells. From there it is still comparatively easy, following a winding track till it strikes the main *kotal* over the watershed. Near Thanishpa it is difficult for camels or horses, as it crosses a succession of flat sloping sandstone slabs. This, however, is no part of the main pass into the Kunder, which diverges just short of this point, and about two miles short of Thanishpa itself, taking a more easterly trend, and following the dry bed of a *nala*, which is salted with white efflorescence, and sparsely fringed with tamarisk jungle for a few miles. Leaving this *nala*, the route

Thanishpa to the Kunder.

risks to the *kotal* (Shin Narai) by an easy ascent, and then plunges down steeply and sharply over shaly ridges for about a mile. Thence it runs into the Kunder plain at the northern end of the Nigange district by easy gradients. At this point, the plain is comparatively open, and the hills on the left bank of the river stand back from it in short and isolated ridges. As a rule, the river bed is dry, but here there is a considerable flow of fresh, sweet water†. The soil of the plain is sandy, covered with wormwood scrub and tufts of short stunted grass, with a sprinkling of tamarisk near the river banks. Wood is plentiful everywhere, but water only occurs at long intervals in the bed of the river, and is usually salt. The Kunder in the month of October is practically dry. The height of the valley is about 6,300 feet at Nigange-Kunder, and the fall of the river gentle throughout its course to the Gomal. The valley is uninhabited and showed few signs of having been grazed over by flocks of sheep or by camels. Yet it is an excellent grazing country, well adapted for sheep farming, and its desertion is probably due to the insecurity of property throughout this 'no man's land.' There is a well recognized route following up the Kunder as far as Nigange, and thence running by several branches across

Watersheds between Kunder and Maruf.

the intervening watershed into the Maruf valley, but the extreme scarcity of water on the high level is a serious obstacle to be encountered. A nearer examination of this elevated tract, which was obtained by Captain Mackenzie from Sakir peak, only serves to confirm our previous impressions as to its character. It is open, but for a few isolated and scattered masses of hills, apparently traversable in any direction, waterless, and it is probably not less than 8,000 feet above sea. It is to be regretted that no opportunity was offered of more thoroughly exploring it, for local native information was most difficult to obtain, and probably utterly untrustworthy when obtained. Possibly water would easily be reached by well sinking, but the absence of villages and cultivation hereabouts indicates an absence of water anywhere near the surface.

* The name of the camp was China or China Shor. The villages belong to the Jogizai sub-section of the Kakar tribe.—A. H. M.

† This water was slightly brackish.—A. H. M.

The upper Kundar proved to be in independent territory, but how far northward its independence extends from the left bank opposite Nigange, it is impossible to say. As far as we could ascertain, our previous information on the subject appeared to be correct, and the limits of the portion of the Tirwah plain, which is not Lohana country, may be accepted as the Afghan boundary in that direction.

In lower Kundar, however, immediately south of its junction with the Gomal, the high and rugged mass of hills that closely hugs the left bank of the river is Suliman Khel country, and these hills quite dominate the entrance to the valley. A more detailed description of the valley will be found in Captain Mackenzie's report.

Leaving the Kundar altogether about eight miles north of Nigange, the column under Sir R. Sandeman struck eastward over a series of low sandstone ridges at close intervals, along a well recognized *kafila* route into the Zhob.

The Chukhan route to Kundar Domandi from Thauishpa. This was for the purpose of surveying the Chukhan valley, from its source to the point reached in last year's survey from Apozai. This road proved unexpectedly easy, considering that it crossed the strike of the hills, and consisted chiefly of a succession of low *kotals* over rough little ridges of sandstone and shale. A march of 17 miles brought the expedition to Tirwa Amun,* a fairly open spot with an excellent supply of running water. There is little to describe about this part of the country. The same physical features present themselves at every turn of the road. Long, straight, saw-backed and narrow ridges, with here and there gigantic slabs of smooth, shining rock encasing them, these ridges being only from 80 to 100 feet in height, but all trending with an approximate parallelism in the same direction, like the bars of a gridiron, were the prevailing features. Southward, the altitude increased, until it culminated in giant mountain masses, deeply fissured and broken, with contorted outlines that cut the clear sky, and sharp shadows in the morning and evening, breaking up their rugged sides into fantastic angular segments of purple and red. In between the narrow ridges are the unvarying narrow valleys, yellow with dried-up grass, or occasionally violet-tinted with the young shoots of a low growing scrub; smooth and easy for travelling, with occasional bare patches of *pat* and the marks of heavy rainfall. Trees were scanty and few. An occasional specimen of the *gwan* (or pistachio) so common on the Khojak, represented the chief tree growth of the country, and there was low tamarisk jungle by some of the *nala* beds. The scenery on the whole is arid and monotonous, but the dry clearness of the atmosphere permitted effects of light and colour that were often surprising in their intensity; and these quite redeemed the landscape from the charge of being uninteresting. Striking north-east from Tirwa Amun, and still following the old *kafila* road, our next halting-place was at Makh-wala War.† On the way we passed through a well-known Pawindah camping ground called Kakarbara, where there is a good supply of brackish water. Here there is a small green corner in the wilderness, with a few willow trees, the only specimens encountered during the expedition. As the route gradually turned from north-east to east, we rose to the almost imperceptible watershed between the Kundar and Chukhan. Near the next halting-place we dropped from a broken little sandstone ridge into a line of drainage called Sanzi or Sandeh War near the head of the Chukhan basin, and presently reached our camp.

From this place to Ambara, which is one of our camps of last year's expedition to the Kundar, when Captain McIvor and myself were deputed to explore the cross country route from Apozai, is a straight run of nineteen miles following down the course of the Chukhan. Approaching Ambara, there were more signs of habitation than we had met with since leaving Thauishpa. Large herds of goats and flocks of sheep were pasturing near the road, and this part of the *kafila* route is evidently regarded as comparatively safe from marauders by the Mando Khel. The continuation of this great high road (for it is the chief route from Kandahar to the frontier according to 'the Bozdar') to Apozai *via* Nawa Oba was described in last year's report; as was also the continuation of our present expedition from Ambara in the opposite direction, *via* Sharan and the Narai Kotal (where we made a road this year) to the Kundar, at the junction of the Gustoi stream. Here, again, we fell in with General White's column which had followed the line of the Kundar direct. From this point, opportunity was taken of

Gustoi.

exploring the Gustoi hills with a view to examining their capabilities for a future sanitarium. The result was disappointing. Previous descriptions of these hills, given by the people who lived at the foot of them, were hardly justified on closer acquaintance. The summit of the range (called Speraghar), which runs to about 8,000 feet above sea-level, proved to be exceedingly narrow, nor was there any other site on the hillsides which would afford accommodation for anything more than a small camp. A rough topographical sketch was made by Shekh Mohiuddin of that part of the range which is immediately above the village of Uzhda Wazha, where it is most easily accessible and where, if anywhere, the required site might be found. The water-supply proved inefficient, and the *chilgoza* forests, of which so much had been said, were thin and scattered, and in no way comparable to those of the Takht-i-Suliman. A small party accompanied General White to the summit of the range further north, more immediately opposite the village of Gustoi. Here the position seems to be even more unsuitable than that first examined. The hills are lower and the

* Called Dholesar in route report.

† Called Sanzi War or Sandeh War in route report.

water-supply is exceedingly limited. In fact, both political and military opinion was unanimous in deciding that nothing could be made of Gustoi. From Gustoi camp to Husain Nika Ziarat is a short and easy march along the Kundar road, calling for no special remark. From the *ziarat*, Sir R. Sandeman's column turned eastward and followed the straightest route to Apozai *via* the Gardao plain, Siritoi, and Brunj. All this country has already come more or less under survey observation, and needs no further description.

The column reached Fort Sandeman on the 28th October, where it awaited the arrival of the rest of the force, which was a day's march behind it.

Preparations for the expedition against the Khiddarzai section of the Sherani tribe were completed in a few days, and the two columns moved forward to the Sherani country in the same order as before, Sir R. Sandeman preceding General White by one day. As far as Spasta, both columns followed the route taken by Mr. Colvin and myself last year when visiting Barkhardar's fort after the Khiddarzais had shown open hostility to our proceedings. Spasta is a small district at the head of the Drazand drainage at the back (or western side) of the Takht mountain, not very far south of the point where that mountain was ascended in 1883. The route between Fort Sandeman and Spasta is part of a well-marked *kafil* road which follows the Siliaza stream for about 9 miles and then turns northward across more or less open plains, flanked with low hills, the slopes of which are covered with extensive groves of olives, and then passes over a low *kotal*, which divides the Siliaza from the Drazand basins. After crossing this 'divide', we left the *kafil* route (which follows on to the Zao pass into India) and curved round the foot of the hills at the head of the valley, till we reached a picturesque spring, hidden in the olive forest and hedged in by a few trees which had evidently been planted there in days when Spasta was better inhabited and more cultivated than at present. The *kotal* which we passed over rises gently from the Siliaza plain and lies between low, shaly, olive-covered hills. The descent on the Spasta side is slightly steeper than the ascent. The next march of 6 or 7 miles from the spring took the column over the dividing line into the Chuhar Khel Dhana basin. Here occurred the only serious difficulty in the entire route from Fort Sandeman to the *dhana*. There is a narrow and steep pass up to the *kotal* (which is only about 2 miles from the spring) and an exceedingly steep descent into the *nala* bed on the eastern side; the ridge is composed of soft shales and clay, which could easily be worked into a road, but as it stood when the column moved over it, it presented considerable difficulties to loaded camels. This, it may be noted, is the best route to the head of the Khiddarzai Dhana, as well as to that of the Chuhar Khel. Sixteen miles from the halting-ground at Sargasa Wasta brought us to Dhana Sar, the head of the gorge which forms the passage for the Chuhar Khel stream through the Suliman range. This sixteen miles was principally along the dry bed of its main affluent, which runs between steep and high ridges (9,000 feet or so above sea), which form the backbone of the range. The valley was narrow. For the last 8 miles it could only have been a few hundred yards wide, the fall of the river bed being estimated at about 1 in 50. It is well watered and wooded with a plentiful jungle of 'palosi,' pistachio, and 'ber,' but there is no wood of any size.

From the 4th November until the 8th, the column halted to admit of a practicable camel road being made through the gorge. The total length of the *dhana*, or gorge, is about 4 miles; the enclosing limestone cliffs are high and precipitous, and the bed of the stream full of gigantic boulders. There has long been a tradition that this Chuhar Khel Dhana passage from India to the highlands was once the great high road of the frontier, but that some ten or twelve years ago it became blocked by falling boulders and was no longer open to camel traffic. I cannot conceive when that open period could have been. There existed in one part of the *dhana* a steep, slippery slope of shining limestone rock, stretching down to the rushing stream, with a sheer precipice facing it, where the defile was perfectly unaffected by any possible landslip, which must have so existed from time immemorial, and which was utterly impassable to any camel ever bred on the frontier. Cattle and donkeys certainly did manage to pass and re-pass almost daily, but then both cattle and donkeys on this part of the frontier are trained to acrobatic feats which would be deemed impracticable by any one who had not witnessed them. A temporary road was with much labour constructed in five days by the united efforts of Sappers, Baluchis and men of the Yorkshire Regiment, but it must inevitably disappear in great part with the first flood. The expense of constructing a permanent highway above flood level would be very great, probably from eight to ten lakhs, but detailed reports on this point have doubtless been submitted by the C. R. E. of the expedition. At Mogal Kot, which is situated at the eastern end of the *dhana*, all difficulty ceases. The road to India thence lies along the stony beds of open *nalas* of the usual trans-frontier character. The oil springs near Mogal Kot were examined by the geologist of the expedition, and the quality of the oil pronounced to be excellent. Whether it exists in workable quantity still remains to be proved by further examination of the neighbourhood.

Opportunity was taken of the occupation of the Sherani country for a careful reconnaissance of the Khiddarzai Dhana and its approaches from the west, as well as for a re-survey of the Larga Sherani districts extending eastwards to the Zao pass, and including the Hassan Khel

and Uba Khel districts. Hitherto this mapping has been derived from the reconnaissance made in the Takht-i-Suliman expedition of 1883. The hilly region due east of the Takht mountain, extending to the old frontier of India, was chiefly sketched in from distant points, no surveyor being permitted to enter it. The map now obtained completes the detail to a level with that of the contiguous frontier mapping on the $\frac{1}{2}$ -inch scale. The Larga Sherani country contains much more cultivated area and many more flourishing villages hidden away in the recesses of the hills than we were previously aware of. The greater part of the district consists of undulations of hard grit and clay of recent formation, invariably surface-covered with a coarse crop of stones, and unprofitable except for the scanty grazing which they afford. These are intersected by a few short and narrow sandstone ridges, which are lower offshoots of the Suliman system. They are, as a rule, easily traversable, and the larger villages are connected by well-marked tracks. Cattle and donkeys are the chief means of progression, and they travel over the roughest and most difficult mountain paths. The Khiddarzi donkey is a very superior animal. He is small, but compact, with plenty of bone and muscle, and has all the appearance of careful breeding. His working qualities are undeniable. The Sherani people are a small and insignificant race, when measured by the standard of their neighbours the Ghilzais. In general appearance they are allied to the Mahsud Waziris, dirty, ill-clothed and badly armed, with the lean and sinewy look so characteristic of hill men. The women are not more prepossessing than the men. They wear the same long black *choga* that is common to the Zhobwals, which gives them a grim, funereal appearance that is anything but attractive.

The main results of the expedition may be summed up as follows :—

- (1) The boundary of Afghanistan proper clearly lies beyond, *i.e.*, to the north of the Lohana, or Lowana, country, the Lowanas not being Ghilzais, but apparently an offshoot of the Mando Khel. Very little is still known about them, as we did not enter their country.
- (2) The Kunder valley undoubtedly affords a fairly open road to Kandahar *via* Maruf, but the Lower Kunder is flanked on its left bank by a very high and rugged mountain mass called Uzhda, the extent of which is still indefinite and which is in the occupation of the Suliman Khel, and the river banks here are steep and broken. The Upper Kunder leads to a watershed about 8,000 feet above sea level, before the road drops into the Maruf basin, across which and for several marches on the northern side water is said to be almost unprocurable during the dry months of the year. This, however, remains to be proved.
- (3) The Rod valley line from the Zhob to Kadanai calls for careful examination. It is clearly practicable for a railway.
- (4) The Gustoi (Speraghar) hills offer no site suitable even for a small sanitarium.
- (5) Gul Kach is by no means a promising position for a cantonment, partly for physical reasons and partly from its contiguity to the unsurveyed Uzhda hills. The best site would undoubtedly be found north of the Gomal in Wana.
- (6) Neither the Chuhar Khel nor the Khiddarzi Dhanas offer practicable routes to India from the highlands at present. The latter may be left out of account altogether. The Chuhar Khel could, no doubt, be converted into a high road at a great expense, but it is not to be compared for facility with the Zao pass on the north or with the Vihowa (*vide* Captain Mackenzie's report) on the south, as it stands at present.
- (7) The Vihowa pass proved particularly favourable for road-making, but the gradients are too steep for a railway.

In concluding this report I would point out the expediency of a thorough examination of the Shinghar hills immediately west of and parallel to the Takht mountain. So far as I know, these hills have not yet been examined, and nothing definite is known, except what could be seen from the Takht peaks. From there, however, it appeared to me that the abundant vegetation indicated a good water-supply, and this is confirmed by report. Certainly their physical conformation is such as to afford good sites at almost any elevation up to 10,000 feet above sea, the rounded slopes of the main spurs bearing a very different aspect to the sharp ragged edges of Speraghar.

Enclosures of Lieut.-Colonel Holdich's Report.

I.

Dated Quetta, 30th January 1891.

From—CAPTAIN R. J. H. L. MACKENZIE, R.E., late Assistant Survey Officer, Zhob Field Force.

To—LIEUT.-COLONEL T. H. HOLDICH, R.E., late Survey Officer, Zhob Field Force.

I HAVE the honor to submit the following report of my work, performed under your orders during the late expedition to the Kunder and Sherani countries, on the occasions on which I was detached from you.

On the 4th October last I received orders from you at Shina Khula to accompany Captain Mason, R.E. We were to go with a small escort, with the intention of marching through the Rod valley, and thence finding our way to Thanishpa, visiting the peak of Sakir *en route*.

Two marches *via* the Dhana pass took us to Babu China, the principal village in the Rod valley. This part of the route has been previously reported on by me, and there is little to add to what is already known. At Andreviezh, the first halting-place, however, we had an opportunity of visiting the so-called Mogal sculptures, of which I had heard in July 1889. They are in the same *nala* as the village, and consist of rough figures chipped on the rocks probably with pieces of stone. They seem to be of no significance, and the traditions regarding them are most likely myths.

It may be noted that in these first two marches, three laden camels accompanied us, and got over the ground with ease. The road had previously been reported impracticable for laden camels.

The weather being clear, we got a better view of the Rod valley than I had obtained in my previous visits, and from all I gathered, my opinion was strengthened that a railway could be run up it and over the watershed between the Zhob and Helmand valleys. The Bilao Kotal, which had always been represented as the chief obstacle to an undertaking of the sort, has now been proved to be comparatively easy.

From Babu China I ascended Sakir, the highest peak of the range which bounds the valley to the north. It is composed of alternate strata of hard and soft sandstone with a steep dip to the north, and a difficult scarp to the south. It is fairly well wooded with *shue*, or wild pistachio trees. From its summit (10,100 feet) an extensive view to the north was obtained.

To the north-west, at a distance of 20 or 25 miles, lay the Suini or Sen Dag, a barren-looking plain, of a dark red colour. Two trees only were visible at a place called Per (the tree), where the guides said there was also a *karez*. There are also one or two other small patches of cultivation. It belonged originally to the Suin Kakars, but formerly the Tara-ghars, and latterly the Mirzais have made great encroachments upon it.

Beyond the Dag, and slightly to the left of it, were seen the Narin peaks and masses of hills over the Maruf and Arghistan valleys. The Dag is bounded on the north by the Malkand range, apparently of red sandstone, and about 9,000 feet in elevation. Its summit has now been fixed by triangulation.

A little east of north the view stretched uninterruptedly over an unbroken stretch of high plateau, as far as the eye could see. Several white patches, probably denoting river beds, were visible in this direction. Any water there may be in this tract is probably salt, and no signs of cultivation could be made out. Closer at hand, in the same direction, the Kundar takes its rise in the eastern part of the same plateau as the Dag. It runs eastwards for a few miles, then turns southwards, through low intricate ranges, until it again runs, in an easterly direction, down a long, rather narrow valley, which is known, in its upper portion, as Shinkai Ghbarg, and lower down as Nigange. The latter name is given to the halting-place where the force first struck the Kundar, and to a stretch of about 30 miles west of it.

South of the Upper Kundar waters, and immediately at the foot of Sakir lies Gargasuliman or Garga Smalan, a long, narrow valley, fairly open at its head, but much enclosed lower down, the waters of which flow into Khaisor. It would undoubtedly present great difficulties to a railway line, as will be shown further on.

Having plane-tabled and observed with some difficulty on Sakir, owing to the sharpness of its peak, I returned to Babu China.

From the Rod valley two passes lead to the north-east, the Lunda and the Kash. We decided to go by the former, both because we should then cover more new country, and because water is obtainable within a more reasonable distance along it. None is met with on the Kash road till Marjan, about 25 miles.

The path led us over an open, undulating and waterless tract, called Sharan, to the *kotal* (8,300 feet) which is reached by a steep ascent of several hundred feet—very difficult for camels. There is then a gentle descent of 200 feet to the Gargasuliman *nala*, where running water slightly brackish, is found. Wood is procurable, but there are only a few scattered huts of Fakirzai Mirzais about.

Immediately north of the Lunda Kotal, and a mile or so from it, is the Uchaki Kotal leading into Shinkai Ghbarg. It is perfectly easy, and a road goes over it to the north. From it Captain Mason and I got a nearer view of the last-named valley. It was here seen to be full of small hills, and generally of an intricate formation.

Besides this road to the north, there is another to the north-west, the first march on which is to a place called Zalo, about 15 miles distant. It belongs to the Mirzais, and there is said to be water there, but no cultivation or wood. It appears to be at the extreme head of the Kundar drainage. Kandahar was said to be reached in seven marches in this direction.

Our next march was down the valley to Marjan. Several patches of cultivation, barley and Indian corn were passed, but all available supplies had been collected for the force at Haodak, so we could get nothing. The harvest here is in July. The road itself mostly followed the main *nala* and was easy going, but, owing to the enclosed and complicated nature of the country, any railway line would meet with very great difficulties.

There is no village at Marjan, but it is well known as a burial-place. The water is plentiful and good, and grazing and wood are procurable. As before mentioned, the Kash road leads to this place. It is said to be easier going than the Lunda. It continues over the Bileri Kotal to the north-east into the Kundar Nigange.

From Marjan, the road we took continued through the same kind of country as before for about 10 miles, when the open plain of Khaisor was reached. In three miles more we reached Haodak, from which point to Thanishpa, we followed the route taken by the column with Sir Robert Sandeman.

From Thanishpa I was ordered by you to accompany the column under command of Sir George White, which was proceeding down the Kundar. Starting on the 17th October, we followed in the footsteps of the column with Sir Robert Sandeman for the first march to Nigange. A *kafila* road to Palezgir and Tirwah here crosses the Kundar, and its having been confounded with that taken by "the Bozdar" has, I think, given rise to several mistakes in the old conjectural maps. "The Bozdar's" route undoubtedly crossed the Kundar at Kala Mulla Kamal. The Wali Murgha was here said to be only a short march to the north.

From Nigange the force marched to Kala Mulla Kamal down the open valley of the Kundar, which is here quite easy. Below this point, however, the difficulties gradually increase as far as Spole Loara where the Kandil joins the Kundar. The latter flows in deep banks of mud and boulders mixed, with numerous side *nalas*, which would require heavy bridging for a railway. For the whole of this distance the water is brackish, and below the junction with the Kandil it is muddy as well.

There are hardly any permanent inhabitants in the whole of the Kundar valley; consequently supplies are not procurable and in many places wood, and grazing even, are deficient.

Below Spole Loara the river makes a sudden turn to the south-east through a high range of limestone hills, dipping sharply to the north-west, and is confined in a narrow *tangi* for over four miles, after which it emerges at Nama Khanai into an open valley. At this place there is a well known *ziarat* in the form of a circle of stones, with an approach from the east, similarly marked by two rows of stones. The guides told us that diseases could be cured by crawling in at this entrance with the eyes shut, and picking up a stone from inside the circle and putting it on the navel. Hence its name, which means in Pashtu "the navel stone."

Below this place the river again begins to cut deep into the ground, and is closely hemmed in by hills on either side. Moreover, just below Khut Kundar, it flows in a deep gorge in the mud hills, and the road has to leave it and go over a *kotal* to the left.

At this place there are springs of a dirty coloured water probably containing sulphur. They have, in course of time, gradually thrown up a large amount of muddy deposit, and their presence would probably be dangerous to any engineering works near them.

From this point downwards the river flows in deep banks of half-formed conglomerate, cut up by deep side ravines, and increasing in height, until at Domandi it is 200 to 300 feet below the general level of the country on either side.

According to your orders, I paid special attention to the Kundar valley, with reference to any future railway that might be run up it, and have come to the conclusion that any such undertaking would be quite impracticable.

At Domandi, the Gomai runs between banks similar in character to those of the Kundar. Looking up it, it is seen to be soon locked in by high hills. Going down it, however, the banks gradually diminish in height until at Gul Kach they are only a few feet high, and the country is quite open. The river here winds in a broad stony bed between banks of high grass and reeds.

From Gul Kach the force marched to Apozai through country which is now thoroughly explored, so that no description of it is necessary.

At Apozai I again received orders from you to accompany the column under the General Officer Commanding, which was intended to operate against the Khiddarwai Sheranis. This force followed the same road that you traversed when accompanying Sir Robert Sandeman as far as Mani Khwar, which was reached on the 2nd November. On the 3rd it made a long and tedious march over the hills to Wala, where it bivouacked. This road is of no importance, as that by Sargasa Wasta is much easier. In fact, it can hardly be called practicable for laden mules.

On the 4th November, the whole available force marched out, with the intention of attacking the enemy's supposed position of Maramazh, which was stated to be on the crest of the high ridge to the east, which here presented a very steep, smooth, rounded back. The road was easy up to a *kotal* which separates the drainage of the Khiddarwai and the Chuhr Khel Dhanas, where Baluch Khan and some other *maliks* were met coming in. They surrendered

themselves, and declared that there would be no opposition to the advance. The force then descended to Ghaura Ghara*, a smooth, round basin, cut out of the solid rock by the water action of one of the head feeders of the Khiddarzai Dhana. It is about 20 feet in diameter, 4 or 5 deep, and was full of rain water.

From Ghaura Ghara the General Officer Commanding ascended Maramazh, accompanied by part of the troops. The range had here lost its peculiar rounded appearance, and the ascent was made over broken and irregular ground to the *kotal*, at a height of 8,000 feet. Thence one path, which was said to be very difficult, led south-east towards Dhana Sar. The force, however, followed one to the north-east to an altitude of 8,310 feet. From this point, Maramazh, a magnificent view was obtained of the whole Sherani country, and heliographic communication was established with Dhana Sar and Drazand.

Namar Kalan, the next objective of the column, lay immediately below, some 3,600 feet down. A reconnaissance of part of the road proved the path to be impracticable for pack animals. On return to Wala, therefore, Sir George White determined to go over the hill without transport. The detachment told off for this purpose bivouacked at Ghaura Ghara on the 5th, and on the 6th November passed over Maramazh to Namar. A few bullocks and donkeys were got down unladen, but of three mules taken one died on the road.

Namar Kalan consists of one large and two or three smaller cultivated flats, entirely surrounded by hills, and with no apparent outlet for the water. The villages are built at a slightly higher level on the slopes around. The permanent water-supply is very scanty and consists of one small spring. To the south-west and west are dense groves of olives and a kind of oak resembling a holly at first sight. To the east lies a high limestone range from the summit of which the whole country below was visible, and on which the central heliographic station was established. Its eastern slopes are well wooded, and contain numerous villages and cultivated flats.

From Namar I rejoined you at Karam Hezai on the 12th November, and on the 14th November I received your orders to accompany Captain MacIvor, Political Agent, Zhob, up the Khiddarzai Dhana to Karim Kach.

We retraced our steps to Atal Khan Kahol† on the *dhana*, and thence proceeded up an easy road in the river bed for another mile. The *tangi* was then entered, a gigantic rift running close under the southern end of the Takht hill. It has the same general character as all the *tangis* through limestone ridges, but owing to the very confined view the scenery only occasionally attained grandeur. We went four miles up it to the head of the water, Oba Sar, where we bivouacked: mules got as far as this with difficulty, but the road could easily be improved. Vegetation was abundant, and olives and vines numerous. On the 15th we continued our march up the ravine for two miles to Gatkai, the junction of the three great gorges that form the head of the *dhana*. A steep and difficult ascent now led to the Khwaranai Kotal at an elevation of 7,130 feet. At this elevation the slopes of the hills were well wooded with *nastas* and *chigozas* on the north, and olives on the south sides. To the north-east, the Takht rose a clear 6,000 feet above the gorge below; to the north were the dense forests on Maidan and Pazai, and eastwards was seen the tremendous *tangi* up which we had come.

An easy descent now led to the Sikhaun Narai, where it is the custom of passers-by to drive a wooden peg into the ground. This is the true *kotal* between the Khiddarzai and Gat drainage areas. From it a road to Maidan and the Takht strikes off north, and below to the west lies the valley of the Lo. The latter is a wide open tract, with large patches of cultivation and some big villages. A descent of 700 feet led to Karim Kach, where we bivouacked for the night. I rejoined you on the 15th November at Karam Hezai.

A separate report is submitted on the Vihowa pass.

II.

Dated Quetta, 30th January 1891.

From—CAPTAIN R. J. H. L. MACKENZIE, R.E., late Assistant Survey Officer, Zhob Field Force,

To—LIEUT.-COLONEL T. H. HOLDICH, R.E., late Survey Officer, Zhob Field Force.

I have the honour to submit the following report of the country passed over with the Vihowa column of the Zhob Field Force.

On the 22nd November the column marched from Dhana Sar. For the first nine miles we followed the road towards Sargasa Wasta, then leaving it on our right, struck west of south by the open Loara plain, keeping close to the hills to the east. The upper part of the Loara is a dead level grassy tract, with patches of *khushkawa* cultivation. There was no perceptible rise to the watershed, but on the far side the road descended into a *nala*, enclosed by low hills, as far as the camp at the village of Mahamzai. The place is better known as Lewaghazh; south of it is a long, open plain running north to south and draining eastwards into the Vihowa. Its north-east portion is called Khwandai, its north-west Razani, and its southern one Sahara.

* Called Ghawar Ghar in the route report.

† Nishpa.

The next march was across this plain, over *kotal*s in two low ranges which break it up, to a place called Toi Sar. A considerable amount of cultivation was passed through and several villages are scattered about. The inhabitants are Margzanis, a tribe allied to the Musa Khel. Below Toi Sar the pass proper was entered, and as the line we took would probably be that chosen for any road from Apozai to the plains near Vihowa, it is described here in some detail.

It may here be noted that, according to native information, good roads for camels lead from Toi Sar to Spasta, Apozai, Babar and Loralai *via* Murgha. It is, therefore, a very central point for trade from the Punjab to the newly annexed districts of so-called British Baluchistan. It is well supplied with water, grass, and firewood.

Half a mile from Toi Sar the pass was entered. On both sides at first are limestone hills, dipping steeply to the west, but after about three miles sandstone and shale strata are encountered, and numerous *kaches*, cultivated by the Musa Khel, are passed. Mostly the coarser kinds of grain are grown. At three and a half miles the sides close in and form an easy *tangi*. At five and a quarter miles limestone strata, with a gentle dip to the west, again occur. At six and a half miles the Plane comes in from the north. It is a steep stony *nala*, which evidently comes down with great force in floods. Its breadth at the junction is about 100 yards. At seven miles the stream runs through a narrow *tangi*, probably half a mile long, through a limestone ridge, with an anticlinal dip east and west. The gorge is very narrow, S-shaped in plan, and its sides are very steep. It is turned by an easy ascent of 360 feet to a *kotal*, and a descent of 160 into a side *nala*. From this the road goes over another spur, with an almost imperceptible rise, and drops into the river, the last few hundred yards being steep. A good road could easily be made here.

The main *nala* is now followed to Tangi Sar at the head of the Kurman *tangi* (3,050 feet). High hills enclose it here, but there is ample room on both banks. The Kurman *tangi* really consists of two short *tangis*, running through thick strata of limestone, with a steep dip to the east. They are joined transversely by a short open stretch through softer formations.

Heavy work would be required for a road through the *tangi* portions, but as they are only about 200 yards long, the expense would not be extraordinary. They might be avoided by going, as the column did, over the range to the north, a rise of 700 feet, and a fall of 400 into the Sema *nala*, but the difficulty of making even a fair road would be very great. On the western slope, the soil becomes impassable in wet weather, and on the eastern, thick strata of limestone interfere with the alignment.

Two days were spent in making a road over, and one day all movements were stopped by the rain. On the 29th November a part of the force which I accompanied moved over to a camp in the Sema *nala*, about a mile above its junction with the main stream.

From this point two alternative roads were reconnoitred. The first led up the Sema *nala* over boulders and stones for two and a half miles, and then, in two and a half more, led by a very steep and stony ascent of 1,800 feet to the Zhba *kotal*. There was a very severe descent on the far side. It was decided not to use this road, but to make one down the Gat *tangi*. This *tangi*, like the Kurman, cuts through two very hard limestone strata, dipping very steeply to the west. In this case, however, the intermediate strata, instead of being soft shales, consist of limestone and black shales of all degrees of hardness. These latter contain numerous sulphur springs, and as they are probably the continuation of the oil-bearing strata of Mogal Kot, they may be worth further investigation.

The whole of the work of making a road through this *tangi* would be very heavy, but it is only some 600 or 700 yards in length. Two working days sufficed to make a road good enough for our camels to pass through, and on the 2nd December part of the force went through, and encamped east of the village of Gat (2,700 feet).

On the 3rd, the whole force marched to Kaiwahan (2,810 feet) by an easy road over a stony *raghza* or plateau. The main stream is not followed in this and the succeeding march, owing to *tangis* which exist below Gat. It was impossible to form an idea of their character, but, as the alternative presents no great difficulty, the matter is of no importance.

From Kaiwahan the road goes by an easy ascent of 800 feet to the Lawargi Kotal. Thence it descends by a stony track to the Badri *nala*, a tributary of the Vihowa, and does not again leave the river bed till it emerges into the open plain near Vihowa. The water, which is as much as 1½ feet to 2 feet deep in ordinary weather, flows down a stony bed, with rocky hills on either side.

A road in the river bed would have to cross and re-cross the stream, and, in one or two places, would have to go over solid rock for short distances. It would be liable to be blocked and damaged by floods, but would be, on the other hand, very cheap to construct and maintain.

Any high-level road would be enormously expensive, and the same would be the case with a railway, besides which the fall (1 in 70) would prevent easy gradients being employed.

Appendix L.

STATEMENT SHEWING THE TRANSPORT ANIMALS EMPLOYED WITH THE ZHOBI FIELD FORCE, 1890.

Particulars.	Started with the Force.	Died or Shot.	Returned.	REMARKS.	
<i>I.—Mules, Pack (Government).</i>					
From Quetta district ...	379	5	374	(a) Joined the force at Apozai on 30th October 1890 when marching to Sherani country.	
From 18th Bengal Lancers— } Grass mules }	52	.....	52	
From Apozai transport ...	(a) 75	.....	75	
TOTAL ...	506	5	501		
<i>II.—Government camels.</i>					
From Quetta district ...	18	4	14	(b) As these camels have been discharged at different stages the last two columns cannot be correctly filled in.	
TOTAL ...	18	4	14		
<i>III.—Hired camels.</i>					
Supplied by Abdulla Khan ...	365	} (b)	.....	
Do. Atta Muhammad ...	1,861		.....	
Do. Haji Harun ...	122		.....	
TOTAL ...	2,348	.....	.....
<i>IV.—Hired donkeys.</i>					
Entertained through the Political Department }	100 (c)	100	(c) Entertained while marching into Sherani country on 1st November 1890 for conveyance of stores.	
TOTAL ...	100	.....	100	

Note.—Besides the above a few bullocks were entertained while in the Sherani country for conveyance of stores over a hilly country.

Appendix M. **ROUTES FOLLOWED BY THE DIFFERENT COLUMNS OF THE ZHOB FIELD FORCE.**

Route taken by General Officer Commanding from Quetta to Drazand.

STAGES.					Old Mileage.	New Mileage.	REMARKS.
					Distance.	Distance.	
Quetta	...	...	...	...	...	...
Kuchlak	...	...	...	...	11½	...	
Khanai	...	...	...	...	16	...	
Kanozai	...	...	...	...	15	...	
Murgha	...	...	...	...	15	...	
Hindu Bagh	...	...	...	...	13	...	
Shina Khula	...	...	...	...	10	...	
Kazhe	...	...	...	...	20¼	...	
Khushnob	...	...	...	...	16	...	
Jaba	...	...	...	...	...	16½	
Toi War	...	...	...	...	...	10½	
Sharan Kach	...	...	...	...	...	13½	
Kuria Wasta	...	...	...	...	...	11	
Thanishpa	...	...	...	...	...	17¾	
Nigange	...	...	...	...	...	17	
Kala Mulla Kamal	...	...	...	...	...	12½	
Nakhal	...	...	...	...	...	15½	
Sara Darga	...	...	...	...	...	11	
Sarmago Kach	...	...	...	...	...	12½	
Husain Nika Ziarat	...	...	...	...	...	10	
Domandi	...	...	...	...	...	8½	
Kurma	...	...	...	...	...	10	
Gardani	...	...	...	...	...	18	
Sapai	...	...	...	...	9½	...	
Brunj	...	...	...	...	15	...	
Apozai	...	...	...	...	13	...	
Kapip Kach	...	...	...	...	8½	...	
Mani Khwar	...	...	...	...	...	15	
Wala	...	...	...	...	...	12	
Ghawar Ghar	...	...	...	...	...	4	
Namar Kalan	...	...	...	...	...	6	
Mogal Kot	...	...	...	...	...	14	
Namar Kalan	...	...	...	...	...	10	
Zindawar	...	...	...	...	...	11	
Sighrai	...	...	...	...	...	5	
Tora Tizha	...	...	...	...	...	5	The Takht was ascended from Sighrai, the party returning to Tora Tizha.
Karam	...	...	...	...	...	16	
Drazand	...	...	...	...	...	18	

Route taken by Loralai Troops under command of Major O'Moore O'Leary, V.O.

STAGES.					Old Mileage.	New Mileage.	REMARKS.
					Distance.	Distance.	
Loralai	...	...	...	...	...	...
Torkheji War	...	...	...	...	20	...	
China Barat Khel	...	...	...	...	12	...	
Gwal Haidarwai	...	...	...	...	8	...	
Toi War	...	...	...	...	...	14	

*Route taken by Captain Mason, Deputy Assistant Quarter-Master General for Intelligence,
from Shina Khula to Thanishpa.*

STAGES.					Old Mileage.	New Mileage.	REMARKS.
					Distance.	Distance.	
Shina Khula	...	...	...	...	...	...
Andreviezh	...	...	...	...	12	...	
Babu China	...	...	...	...	9	...	
Gargasuliman	...	...	...	...	...	14	
Marjan ...	...	...	...	...	...	10½	
Haodak	...	...	...	...	...	10	
China	...	...	...	...	...	16	
Thanishpa	...	...	...	...	...	18	

Route taken by Colonel Nicolson's Column from Shina Khula to Thanishpa.

STAGES.					Old Mileage.	New Mileage.	REMARKS.
					Distance.	Distance.	
Shina Khula	...	...	...	...	...	...
Maidan Kach	...	...	...	...	...	13	
Baraksia	...	...	...	...	...	13½	
Haodak	...	...	...	...	9½	...	
China	...	...	...	...	16	...	
Thanishpa	...	...	...	...	18	...	

Route taken by Sub-Surveyor Asgar Ali from Kuria Wasta to Apozai.

STAGES.					Old Mileage.	New Mileage.	REMARKS.
					Distance.	Distance.	
Kuria Wasta	
Nawa	12	
Shaighali	12	
Sengan	10	
Sur Kach	10	
Apozai	15	

*Route taken by Lieutenant-Colonel Morgan's Column from Kuria Wasta to Apozai
via the Zhob Valley.*

STAGES.					Old Mileage.	New Mileage.	REMARKS.
					Distance.	Distance.	
Kuria Wasta	...	...	...	...	...	...
Sharan Kach	...	...	...	...	11	...	
Toi War	...	...	...	...	13½	...	
Tangi War	...	...	...	...	...	15	
Musazai	...	...	...	...	...	18	
Badenzai	...	...	...	...	...	15	
Apozai	...	...	...	...	16	...	

Route taken by Colonel Nicolson's Column from Thanishpa to Husain Nika Ziarat.

STAGES.					Old Mileage.	New Mileage.	REMARKS.
					Distance.	Distance.	
Thanishpa	...	...	...	...	...	...
Nigange	...	...	...	...	17	...	
Dholesar	...	...	...	...	...	10½	
Sanzi War	...	...	...	...	...	21	
Ambara	...	...	...	...	...	19	
Sharan	...	...	...	...	6	...	Lieutenant Southey from here visited Uzhda Wazha rejoining the column at Gustoi War.
Gustoi War	...	...	...	...	17	...	
Husain Nika Ziarat	...	...	...	...	8	...	

Route taken by Colonel Nicolson's Column from Husain Nika Ziarat to Gardani.

STAGES.					Old Mileage.	New Mileage.	REMARKS.
					Distance.	Distance.	
Husain Nika Ziarat	
Inzara	3½	
Gardani	20½	

Route taken by Colonel Nicolson's Column from Mani Khwar to Karam.

STAGES.					Old Mileage.	New Mileage.	REMARKS.
					Distance.	Distance.	
Mani Khwar	
Sargasa Wasta	7	
Dhana Sar	16½	
Mogal Kot	10	
Parwara	8	
Karam	8	

Route taken by Lieutenant-Colonel Morgan's Column from Dhana Sar to Quetta via the Zhob Valley.

STAGES.					Old Mileage.	New Mileage.	REMARKS.
					Distance.	Distance.	
Dhana Sar	...	...	...	...	...	...
Sargasa Wasta	...	...	...	...	16½	...	
Mani Khwar	...	...	...	...	7	...	
Kapip Kach	...	...	...	...	15	...	
Apozai	...	...	...	...	8½	...	
Badenzai	...	...	...	...	16	...	
Gwal Ismailzai	...	...	...	...	21	...	
Gwal Haidarzai	...	...	...	...	20	...	
Akhtarzai	...	...	...	...	22	...	
Saifulla Kila	...	...	...	...	10½	...	
Kazhe	...	...	...	...	15	...	
Shina Khula	...	...	...	...	20¼	...	
Hindu Bagh	...	...	...	...	10	...	
Murgha	...	...	...	...	13	...	
Kanozai	...	...	...	...	15	...	
Khanai	...	...	...	...	15	...	
Kuchlak	...	...	...	...	16	...	
Quetta	...	...	...	...	11½	...	

Route taken by Major Symons' Column from Karam Hezai to Vihowa.

STAGES.					Old Mileage.	New Mileage.	REMARKS.
					Distance.	Distance.	
Karam ...	...	...	...	...	...	...
Parwara ...	...	...	...	...	8	...	
Dhana War	...	...	...	...	13	...	
Dhana Sar	...	...	...	...	5	...	
Lewaghwazh	...	...	...	...	...	19	
Toi Sar ...	...	...	...	...	...	9 $\frac{1}{2}$	
Tangi Sar...	...	...	...	...	...	12	
Sema ...	...	...	...	...	...	5 $\frac{3}{4}$	
Kaiwahan	...	...	...	...	7 $\frac{3}{4}$...	
Chitarwata	...	...	...	...	13 $\frac{1}{2}$...	
Garibar ...	...	...	...	...	8 $\frac{1}{2}$...	
Vihowa ...	...	...	...	...	15	...	

Route from Tangi Sar to Vihowa, by Lieutenant Southey, Field Intelligence Officer, via the Guzai nala.

STAGES.					Old Mileage.	New Mileage.	REMARKS.
					Distance.	Distance.	
Tangi Sar	
Shne Kazhe	17	
Vihowa	39 $\frac{1}{2}$	

Route taken by Major Symons' Column from Vihowa to Ghazi Ghât.

STAGES.					Old Mileage.	New Mileage.	REMARKS.
					Distance.	Distance.	
Vihowa ...	...	...	...	...	...	...
Tibbi ...	...	...	...	...	15	...	
Taunsa ...	...	...	...	...	22	...	
Andana ...	...	...	...	...	15	...	
Shasadaruddin	...	...	...	...	15	...	
Dera Ghazi Khan	...	...	...	...	15	...	
Ghazi Ghât	...	...	...	...	8 $\frac{1}{2}$...	

Route taken by Major O'Moore Creagh's Column from Vihowa Toi Sar to Loralai.

STAGES.					Old Mileage.	New Mileage.	REMARKS.
					Distance.	Distance.	
Vihowa Toi Sar	...	...	...	...	...	...
Musa Khel Bazar	...	...	...	...	...	10	
Pezwan Kach	...	...	...	...	11	...	
Lak	...	...	...	...	7	...	
Murgha	...	...	...	...	15	...	
Zirra	...	...	...	...	16	...	
Marra Tangi	...	...	...	...	20	...	
Loralai	...	...	...	...	16	...	

Route taken by Sections of Field Hospitals (British and Native) and Section Sappers and Miners from Loralai to Harnai.

STAGES.					Old Mileage.	New Mileage.	REMARKS.
					Distance.	Distance.	
Loralai	...	...	...	...	...	...
Inzar Ghât	...	...	...	...	17	...	
Ashgara	...	...	...	...	15	...	
Berkley's Bottom	...	...	...	...	10½	...	
Harnai	...	...	...	...	14	...	

Route taken by Colonel Nicolson's Column from Karam Hezai to Apozai via the Zao Pass.

STAGES.					Old Mileage.	New Mileage.	REMARKS.
					Distance.	Distance.	
Karam	...	...	...	...	...	...
Drazand	...	...	...	...	18	...	
Murgha	...	...	...	...	...	7	
Sur Kach	...	...	...	...	...	8	
Gandari Kach	...	...	...	...	7	...	
Kamal Kulia	...	...	...	...	9	...	
Mazrai Kach	...	...	...	...	10	...	
Amandi Dar	...	...	...	...	...	11	
Barkhardar's Fort	...	...	...	...	...	15	
Kapip Kach	...	...	...	...	16	...	
Apozai	...	...	...	...	8½	...	

Appendix N.

Detailed reports of New Routes followed by the Zhob Field Force.

No. of Route.						Distance in miles.	
I.—	QUETTA TO THANISHPA	via	THE TOI VALLEY	...	...	186
II.—	SHINA KHULA TO THANISHPA	via	BABU CHINA AND THE LUNDA PASS	...	...	89½
III.—	"	"	" HAODAK	via	BARAKSIA	36	
IV.—	THANISHPA TO HUSAIN NIKA ZIARAT	via	THE CHUKHAN VALLEY	...	...	98½
V.—	"	"	"	via	THE KUNDAR VALLEY	78½	
VI.—	HUSAIN NIKA ZIARAT TO APOZAI	via	DOMANDI AND GARDANI	...	...	74
VII.—	"	"	"	GARDANI	via	THE SHINEBAZA KOTAL	23½
VIII.—	APOZAI TO DERA ISMAIL KHAN	via	THE CHUHAR KHEL DHANA	...	...	123½
IX.—	"	"	"	via	WALA, NISHPA AND DRAZAND	126½	
X.—	NAMAR KALAN TO MOGAL KOT	via	WALWASTA AND BACK	via	WARGHAEI	24	
XI.—	NISHPA (IN THE KHIDDARZAI DHANA) TO THE TAKHT-I-SULIMAN AND BACK TO KARAM	...	...	...	...	32
XII.—	DHANA SAB TO VIHOWA	...	...	...	...	90½
XIII.—	ALTERNATIVE ROUTE FROM TANGI SAB TO VIHOWA	via	THE GUZAI ROUTE	...	...	56½
XIV.—	DERA ISMAIL KHAN TO APOZAI	via	DRAZAND AND THE ZAO PASS	...	...	137½
XV.—	DRAZAND TO RAGHASAB	...	...	...	...	11
XVI.—	GANDARI KACH TO KASHMIR KAR POST	...	...	...	...	7½

Route No. I.

FROM QUETTA TO THANISHPA *via* THE TOI VALLEY.

No. of Stage	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
1	KUCHLAK ...	11½	11½	See "Routes on the North-West Frontier."
2	KHANAI ...	16	27½	
3	KANOZAI ...	15	42½	
4	MURGHA ...	15	57½	
5	HINDU BAGH ...	13	70½	
6	SHINA KHULA ...	10	80½	The made road stops at Hindu Bagh, and the road onwards is an ordinary camel track over stony and sandy ground covered with <i>tsot</i> and camel-grazing. Camping-ground unlimited on a level plain. Water from a single stream, which fills a tank of native construction in 12 hours.

A day's notice should be given to have the tank filled. Supplies collected here by political authorities from the neighbouring villages. Camel-grazing plentiful from June to November. Wood scanty. Height of camp 5,650' (aneroid).

7	KAZHE ...	20½	100¾	The road for about 5½ miles traverses a dusty plain partially cultivated, but now (October) lying fallow. Here and there to the right of the track are solitary watch towers, but no villages. To the left of the track at this point is a hamlet called Tharai, consisting of a few huts lying ¾ mile to left and at the foot of the hills. At about 6½ miles the range on the left decreases in height, and a footpath leads over it. A few hundred yards further on is a dilapidated well; the channel or watercut is dry, but it is not improbable that a good rainfall might set it working again. The whole valley now is suffering from a 3 years' drought. A quarter of a mile further on the road forks, the path to the left leading into the hills. At 8 miles pass a ruined fort called Khankai. This is similar to others found in the valley, and their construction is attributed to the Mogals. At 8½ miles pass the ruined village of Kila Basharat, about ½ mile to the left of road on low spur. The fort here was destroyed by the Zhob Field Force of 1884. At 9½ miles pass village with tower a mile to the right of road. It lies on a wide <i>nala</i> coming down from the hills on the left. At 12¾ miles road goes through low sandhills sprinkled with a few tamarisks. It is here somewhat heavy marching for troops. Pass a village (Dillu Khan's) about ¾ mile to the right of the road. At 14¾ miles the road goes through heavy sandhills, and passes another village called Siraghah on the left at about the 19th mile. This is uninhabited now. The reason given by the guide is that the inhabitants have taken their cattle to the Zhob Lora and also to the Musa Khel country, where grazing is more plentiful than here. At 19½ miles path forks; keep to the right, and the camping ground is reached at a little over 20 miles. The whole plain here is very much wrinkled and cut up with <i>churs</i> . The stream, which flows immediately south of the camp, closely resembles the Pishin Lora. Steep perpendicular banks of clay, some 60 feet high, the actual stream occupying a very small portion of the bed. The water is rather brackish, but drinkable. The camping ground is very irregular with clay heaps covered with tough scrub and tamarisk. Camel-grazing and fuel abundant. Supplies arranged for by political authorities. For small parties sufficient might be procured from the village which lies 3 miles to the west. Camping-ground on left bank of the Zhob from which the water-supply is obtained. Camel-grazing and wood abundant.
---	-----------	-----	------	---

8	KHUSHNOB ...	16	116¾	For about 1½ miles road over clay, and then through thin tamarisk. At 2½ miles it turns north, and 200 yards on enters a deep and narrow <i>chur</i> or watercourse with steep clay banks 20' high, and, going down this for about 300 yards, ascends by a ramp on to an open plain, and continues across it in the direction of a conspicuous peak called Yogwash. At 3½ miles road descends into another <i>chur</i> , here about 100 yards wide and covered with tamarisk; descent gradual, but soil heavy; small sluggish stream at bottom draining to Zhob Lora. A few ruined huts to be seen in the bed and plenty of tamarisk. A quarter of a mile further ascend opposite bank, also easy, and continue as before across plain, winding round now a little to east of north. A little short of the 4th mile pass small village on left called Shah or Shakh Killi. The road goes over firm reddish clay, but the land on both sides is cut up by branches of the main <i>nala</i> or <i>chur</i> . Road now goes along flat plain covered with tussocks of grass and different kinds of camel forage, and at 7½ miles passes a <i>ziarat</i> called Sarakhula at the mouth of an opening in the hills, which are here close on the road. Onwards road goes through heavy sand and crosses a low spur. At 10½ miles pass hamlet of Mulla Suja on right. One well here of good water. Troops might halt here and fill water bottles. Half a mile further cross a wide and shallow watercourse, with tamarisk here and there, and about 1 mile further on pass Mullazai Karez or Karezgai, a deserted hamlet. There are here two poplar trees, but they are rapidly dying from want of water. The <i>karez</i> has fallen in, but it might be repaired, and probably will, after a rainy season. There are a few stone habitations, and the place
---	--------------	----	------	--

ROUTE No. I—*contd.*

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	

shows signs of having been much frequented. Were the *karez* in working order, this spot would make a better halting-place than Khushnub, where the water is saline. Crossing shallow *nalas* and going over heavy sand reach Khushnub or Shnub hamlet at $15\frac{1}{4}$ miles, lying in a corner of the hills immediately on the left of the road. Over a firm gravelly plain reach the Khushnub fort at about the 16th mile. This fort, now in a ruined condition, stands on a mound in the midst of a small amphitheatre of hills. On the north side, under a low ridge, is a fairly large spring, the best for drinking that can be had, but it has a peculiar flavour that nothing can disguise. There are other springs and shallow wells round about, but they are all brackish. Camping-ground unlimited, and very good on firm gravel and clay. A few flocks of sheep and goats seen grazing in the hills around. A sufficient quantity of supplies obtainable for a small force if due notice be given. A sufficient amount of camel-grazing and fuel obtainable at short distance from camp.

9	JABA	...	$16\frac{1}{2}$	133 $\frac{3}{4}$	Road goes along in a east-north-east direction at the foot of a range of jagged peaks to the left, crossing alternately dry sandy watercourses which drain towards the Zhob river, and the stony and gravelly <i>damar</i> of the range. At about $4\frac{1}{2}$ miles several tracks cross the road, all leading to the Sur Tangi, by which goes a footpath into the Khaisor valley. At about $5\frac{1}{2}$ miles a short way up a ravine on the left is a cluster of huts (Hamza), and somewhere near is said to be a well of brackish water. At $8\frac{1}{2}$ miles is another similar cluster of huts on the left belonging to the Hamzas, and at about 9th mile are some stone enclosures on the left of the road, near which is a well of good water about 30 or 40 feet from the surface of the ground. Several tracks cross the road leading from the villages in the Zhob valley into the hills, which belong to the Daulatais. About the 10th and 11th miles two small hamlets on the right of the road and a little <i>jowar</i> cultivation, but the inhabitants have to get their water either from the well above mentioned or from the Lora. At $12\frac{1}{2}$ miles road ascends long rolling spur. Here on right is a <i>ziarat</i> and graveyard. Road now turns to the north into a sort of defile by a stony watercourse, entrance about 200 yards wide; low ridges on both sides. After about $1\frac{1}{2}$ miles it begins to open out. At 14 miles road goes sharp round to the right, leaving the watercourse, and after half a mile descends into the Sebzai or Siwaie valley, which it crosses. This valley is wonderfully level, and is about $1\frac{1}{2}$ miles wide, well cultivated, and has a few mat huts. On reaching north side of valley, the road enters the hills by another defile, also called the Sarkhula. The ground here and all along the defile is considerably coloured, almost every shade of red and grey. At 16 miles road enters narrow <i>tangi</i> , 30 yards wide at mouth, with sharp ridges running east and west. There is water in bed of stream here in shallow wells, but it is very muddy and stagnant. Along this torrent bed, out into another valley, on the opposite side of which is the camping-ground of Jaba or Zhaba at $16\frac{1}{2}$ miles. Camping-ground is very undulating, and tents have to be pitched to suit the ground. Water from a single spring good and fairly plentiful. It flows into a small tank which is now almost filled up with blackish mud and reeds. It would be worth while to have it cleaned out, and the black mud which lies in the bed of the stream dug out, should this place become a regular halting place between upper and lower Zhob. A little coarse grass is procurable, but for forage and fuel for a force arrangements should be made beforehand.
---	------	-----	-----------------	-------------------	--

10	TOI WAR	...	$10\frac{1}{2}$	143 $\frac{3}{4}$	A path goes straight along this valley in an easterly direction, and strikes the Toi Tangi near the entrance, saving about 2 miles; but as this was not known to the guides with the force, we returned to the Sebzai valley, and the road continued in an easterly direction, keeping at the foot of the range on the left (north) side, going very easy, and passing a good deal of <i>jowar</i> cultivation on the right. At $5\frac{1}{2}$ miles cross a track leading towards a gap in the range on the left (this range is called Tora Khulel). The valley here is covered with tussocks of grass and dry scrub, and there are a few tamarisks lining the watercourse. At $8\frac{1}{2}$ miles reach mouth of the Toi defile. There are here a few stone enclosures, where evidently shepherds halt. The entrance of the pass is about 200 yards wide. The hills on both sides are low, but jagged and broken, and there are some pools of very muddy looking water in the bed. The road now takes a bend round from north to east, and continues in this direction along the somewhat stony bed of the stream, and over its banks to the camp, which is reached at $10\frac{1}{2}$ miles, and lies at a point where the <i>tangi</i> takes another turn to the north. Road easy for camels throughout. Camping-ground on stony plateau above right bank of the stream, and also on a sort of island in the middle of the bed, and again on level patches on the opposite bank, sufficient for two brigades. Water from pools in the bed perennial, but bitter and rather muddy; very little camel-grazing and grass; no fuel. Flocks of sheep and goats seen about grazing on the hills. Height by aneroid 5,300.
----	---------	-----	-----------------	-------------------	--

11	SHARAN KACH		$13\frac{1}{2}$	157 $\frac{1}{4}$	The road lies the whole way along the bed and over the banks of the Toi stream. After rain this must be a rushing torrent, filling the whole <i>tangi</i> in some of the narrow places, and rendering the road absolutely impassable. At this (the driest) season of the year (October) there are several pools in the bed. There are some good <i>kaches</i> on both banks, where troops might encamp, and coarse grass and tamarisk are procurable in many of the <i>nalas</i> draining into this. The ranges on both sides vary in character considerably. Between the 8th and 9th miles they resemble knife-blades, and one might sit astride of the crests; near Sharan Kach, however, they are a confused mass of grey clay hills quite bare. The camping-ground at this latter place is on level ground on both sides of the stream, sufficient for a brigade at least. Water abundant and good from the stream. Fuel procurable from a distance, and a little camel-grazing.
----	-------------	--	-----------------	-------------------	--

12	KURIA WASTA		11	168 $\frac{1}{2}$	The road keeps along the bed of the stream, which has a fairly straight course, in a northerly direction for 2 miles. It then bends round first to east and then north-east, and at $3\frac{1}{2}$ miles the road quits this stream, which now has a good flow of water in it, and goes up the Sarobai, a narrow insignificant looking <i>nala</i> , and dry. There is, however, coarse grass and plenty of wild pistachio trees on the hillsides. Road thus far easy. The hills on both sides up to this point are of clay covered with <i>debris</i> of stone, gravel, &c., but on both sides of the Sarobai they appear to be of limestone, and are steeply scarped near the crest. The <i>nala</i> is about 7 yards wide at the entrance, and there is only just room for laden camels to go in single file. At 4 miles ascend a small but steep spur, slope about 14° ; this cuts off a bend in the stream, the road descending into it again almost immediately by an equally steep gradient. The road follows this <i>nala</i> for about $3\frac{1}{2}$ miles more, and then leaves it, and crossing a flat watershed descends by a steep and narrow path into the Toi
----	-------------	--	----	-------------------	--

ROUTE No. I—*concl'd.*

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	

stream again. This part of the road was improved by the sappers, but it is still very trying for laden camels. The road now follows the stream to the camping-ground at Kuria Wasta, which is reached at 11 miles. Unlimited camping-ground on a stony and gravelly plateau. Water, fuel, and camel-grazing abundant. Height 6,184'.

13	THANISHPA ...	17 $\frac{3}{4}$	186	Road still keeps along the Toi watercourse, which has high steep banks, and at one mile the <i>nala</i> forks. Road keeps to the left branch, and $\frac{1}{2}$ mile beyond is a small tower with a little cultivation in the <i>nala</i> . Road leaves <i>nala</i> here and goes over undulating ground on the left, striking <i>nala</i> again at 2 $\frac{1}{2}$ miles.
----	---------------	------------------	-----	--

About $\frac{1}{4}$ mile further *nala* widens a bit, and there is a well here with some shepherds' enclosures close to it. At 6 $\frac{1}{2}$ miles road leaves the *nala*, which here has very precipitous banks from 60 to 80 feet high, and enters a long plateau, undulating at first, but becoming more level as the road ascends. From 7 $\frac{1}{2}$ to 9 miles cross perfectly level plain covered with sheep bitten grass, and then begin to descend into more broken ground. About $\frac{1}{2}$ mile on pass through large graveyard, and at 9 $\frac{1}{2}$ miles road enters *nala*, and at this point there is a well in the bed on the left, the inside of which is revetted with stones, and the water, which is good, is about 10 feet from surface of the ground; 200 yards on is a second well similar to the first one. Road now begins to enter the range enclosing the Khaisor valley on the north, ascending dry *nala*, with low broken hills on both sides. At 10 $\frac{1}{2}$ miles small pool in bed of *nala*, which is narrow and rocky for about $\frac{1}{2}$ mile, the stream going at right angles to the strata. At 11 $\frac{1}{2}$ miles ascend stiffish spur, and a few hundred yards on through a very narrow gap in the strata, and another stiff ascent. Shepherd's hut and flocks seen here. The ascent to *kotal* continues to 12 $\frac{1}{2}$ miles. Road now descends, but path is in places rocky and narrow; 200 yards on is a well nearly filled in, water good, but scanty. Road now bears round to the right (north) through a more open *nala*, which further on becomes rocky ground, and at 15 $\frac{1}{2}$ miles crosses a stiffish spur, descending by a zigzag to an open *nala*, where are three shallow pits or wells of water. Commissariat camp pitched here. Thence to Thanishpa road winds through low hills for about 2 miles; then enters the Thanishpa valley, and goes west for about one mile to where camp was pitched.

Route No. II.

FROM SHINA KHULA (ZHOB VALLEY) *via* BABU CHINA AND THE LUNDA PASS TO THANISHPA.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	

1	ANDREVIEZH ...	12	12	The road from camp leads across a stony plain in a direction west-north-west for 2 miles to the mouth of the Dhana <i>nala</i> , following the small stream from which the water-supply at Shina Khula is obtained. The path then drops into the <i>nala</i> , and winds about among low hills keeping to its stony bed.
---	----------------	----	----	--

At 4 miles a small hamlet is passed on the left, named Khoba; and about a mile further on a branch *nala* goes off to the right up which there is a lateral communication with the Rod valley. The bed of the Dhana *nala* is about 50 yards wide with low hills on each side covered with tamarisk, wild pistachio and camel-thorn in places. Water is also obtainable here and there in small quantities, but at certain seasons the supply is said to be more plentiful. At 8 miles pass the small hamlet of Tor Tangai, and about a mile further on the *nala* bed is left and a steep ascent up the hillside is made. This ascent is about 1,000', and although the road is here passable for laden mules, it is difficult for camels with ordinary loads. We managed to take up a few laden camels, but it required time. From the top of the ascent the road descends for 350' into a hollow in which is situated the small village of Mardakai, consisting of some ten hamlets surrounded by a little cultivation. The ascent to the true *kotal* is then made, which is 750' above Mardakai. The height of this *kotal* is 8,780'. From here the road gently descends for 2 miles to the small village of Andreviezh, inhabited by Mardanzais. This village is prettily situated among the hills, and contains about 60 houses. Water is plentiful, and a limited amount of *bhusa* and firewood procurable. Camping-ground is very limited. The general direction of the march is north-west. Height of Andreviezh 8,480' (aneroid).

2	BABU CHINA ...	9	21	The road, after leaving Andreviezh runs along the bed of a <i>nala</i> and then enters the head of a branch <i>nala</i> , and descends this in a northerly direction to 3 miles. The going here is bad. The <i>nala</i> bed is covered with loose stones, and the descent is steep. At 3 miles the road crosses a low <i>kotal</i> . About $\frac{1}{2}$ mile off the road at this point, and up a <i>nala</i> to the right is a small village called Wala belonging to Mardanzais. It contains about 20 houses, but is only occupied for a few months in the winter. Soon after crossing the low <i>kotal</i> , the road again enters the head of another narrow ravine. Here also the road is bad and steep for about 1 mile, when the <i>nala</i> opens out and at 5 miles is joined by another and larger one from the left. At the junction is a Mardanzai village called Kozhkats containing some 40 houses. After passing this point Mardanzai territory is left behind, and the Mirzai country is entered. The road now continues down the broad open bed of the <i>nala</i> , and is easy going until at 7 miles the village of Mogal China is reached. This is a village containing some 70 houses of Mirzais. <i>Makai</i> fields are dotted about, and there are some fruit trees. Two miles further, over the open valley of the Rod (about 3 miles broad), which is now entered, Babu China is reached. Here a large force might encamp. Water plentiful and supplies procurable. Headman, Mulla Dilber, the <i>Sardar</i> of the Mirzais. The inhabitants of Babu China belong to the Fakirzai section of the Mirzais. Crops consist of wheat, <i>makai</i> , and a little barley. There are numerous fruit trees. There are several separate villages, which contain altogether some 400 men. Each village has its own name, such as Babu China, Tsallak, Murgha, &c., but the general name of Babu China is given to the group. Babu China is itself the most easterly of these villages. General direction of march north-north-east. Height 7,250'.
---	----------------	---	----	--

ROUTE No. II—cont'd.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
3	GARGASULIMAN ...	14	35	On leaving camp, cross bed of Rod which is here about 300 yards broad. It is stony, and contains numerous pools of excellent water. The track then goes along the left bank down the valley to $1\frac{1}{2}$ miles, when it inclines to the left, and ascends over a fairly open but undulating <i>daman</i> in an east-north-east direction to 5 miles. This is stony and covered with scrub, which would make good camel-grazing. At 5 miles the track enters more broken ground and winds about among ravines and low hillocks to 10 miles. It here enters a <i>nala</i> up which the path runs for $2\frac{3}{4}$ miles, to the foot of the Lunda Kotal. This ascent is 370', but is rather steep, and it took the mules $\frac{1}{2}$ hour to get up this short bit. The top of the <i>kotal</i> is about 13 miles from Babu China. Height 8,300'. A mile beyond the <i>kotal</i> is the camping-ground at Gargasuliman, near two pools of water, not very good but drinkable. There is no village here, only two shepherds' hamlets. The descent from the <i>kotal</i> on the north side is gentle. No supplies, except firewood, are obtainable. General direction of march is east-north-east. There is any amount of camel-grazing all along the route, but no water except a small pool near the <i>kotal</i> . The road is very trying for baggage animals, but it was not necessary to take the loads off the camels. Height of camp 8,150' (aneroid).
4	MARJAN ...	$10\frac{1}{2}$	$45\frac{1}{2}$	On leaving camp, the track descends along the bed of the ravine which drains Gargasuliman. This <i>nala</i> winds about among hills, but the general direction is east. At 6 miles a <i>tangi</i> named Dirgai is reached, and in order to avoid this the track runs to the south of the <i>nala</i> , which it rejoins again below the <i>tangi</i> at $7\frac{1}{2}$ miles. The track continues to follow the valley, which here widens out, for the next 4 miles, when the camping ground at Marjan is reached. This is simply a camping-ground without any hamlets, and is used by shepherds. There is good water in the pools in the bed of the stream. All along this march there is water here and there in pools, also any amount of camel-grazing (tamarisk, wild pistachio, camel-thorn, &c.) There is no cultivation, and no grass is obtainable. At Marjan itself there are no supplies, except abundant firewood. This march is through the territory of the Fakirzais. There are no camels, but sheep and goats are obtainable. There is no difficulty for laden camels and mules since the track lies throughout either along the stony bed of the <i>nala</i> or along its banks. General direction of march east by south. Height of camp Marjan 7,550' (aneroid).
5	HAODAK ...	10	$55\frac{1}{2}$	Leaving the camp at Marjan, the track passes through a graveyard and then continues to wind down the valley, following generally the direction of the <i>nala</i> . The path does not, however, follow its bed, but goes over low spurs on either side, returning now and then to the bed itself. Water has now disappeared, but in places are a few small pools. At 4 miles the road leaves the <i>nala</i> and goes over undulating hillocks covered with stones. At 5 miles Mirzai lands are left and Jalalzai territory is entered. The valley has now opened out and is known as Khaisor. The road runs down the valley over ground alternately sandy and stony covered with low scrub, but no trees. The Khaisor <i>nala</i> is quite dry. At 10 miles Haodak is reached. Here there is no village and supplies are not procurable; water for a small force is obtainable from springs about $\frac{1}{2}$ mile to the north of the Khaisor <i>nala</i> . Camel-grazing obtainable at a little distance from camp. General direction of road east by south. Height of Haodak 7,000'.
6	CHINA ...	16	$71\frac{1}{2}$	On leaving camp the track winds about among low hills on the north side of the valley for 1 mile, and then runs east-south-east across the valley to the Khaisor <i>nala</i> , which it follows the whole way to China. There is no difficulty along this march. The ground is generally sandy with loose stones, and covered with low scrub which is unsuitable for camel-grazing, but is eaten by sheep and goats. The valley is here about 5 miles broad, and is bare of trees or habitations of any description. At 11 miles tamarisk begins to make its appearance in the Khaisor <i>nala</i> ; at 12 miles the track leaves the bed of the Khaisor and runs along its right bank until China is reached at 16 miles. Here there is a small Jogizai village consisting of about 10 separate hamlets with a little cultivation. General direction of march east-south-east. Water is obtained at China in pools in the Khaisor and is plentiful. No water is met with elsewhere during the whole of this march. Camel-grazing is obtainable about the camping-ground; also a little grass. Sheep and goats can be bought, but other supplies are not procurable. Height of camp 6,455'.
7	THANISHPA ...	18	$89\frac{1}{2}$	On leaving camp the track follows main <i>nala</i> (Khaisor) for $\frac{1}{2}$ mile to the Jogizai village of Sharan 50 or 60 houses. Here there is some cultivation and an abundant supply of water. The track then leaves the Khaisor and turns up a branch <i>nala</i> called the Malawa in a northerly direction. This is followed to $1\frac{1}{2}$ miles, when the track leaves it and runs across the valley in a north by west direction (the ground being slightly undulating) to 10 miles. This is good going for transport animals. At 10 miles the low hills at the foot of the Torghar range are reached at the mouth of the Thanishpa pass. Here there are two wells of water, and this is a halting-place for caravans. The track then ascends to the <i>kotal</i> , which is reached at 13 miles. Height 7,500' (aneroid). The ascent is gradual, and on the further side there is a short descent of 150', after which the track slightly ascends again and, winding about among the hills reaches the camp at Thanishpa at 18 miles. General direction of march north-north-west. At a spot $2\frac{3}{4}$ miles before reaching Thanishpa water is found near the road in 2 or 3 small pools. The camp at Thanishpa is situated on a plateau, and is surrounded by hills on all sides. There is a certain amount of cultivation, but the grain produced is barely sufficient for the requirements of the inhabitants. Water is good and plentiful from a stream. Thanishpa belongs to the Shahizai sub-section. No supplies are obtainable except firewood and grass. Sheep and goats can be procured and excellent camel-grazing is to be had all round. There are hamlets dotted about here and there, but no regular villages. Camping-ground is confined and it is necessary to split up a force in small camps. Height of Thanishpa 7,850'.

Route No. III.
FROM SHINA KHULA TO HAODAK *via* BARAKSIA.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
1	MAIDAN KACH ...	13	13	On leaving camp the road follows a camel track at the north side of the valley, direction east-north-east; easy going. At 2½ miles the road leaves the camel track, and winds under the hills to the left. The ground is smooth and hard, with a little camel-thorn and scrub. The going is good. The road continues thus to 9½ miles, when the deserted village of Shalut Khan is passed. This is a large village with a burial ground near it. It was deserted owing to failure of water-supply. At 10½ miles the direction changes to nearly due north, the road following a camel track up the bed of a <i>nala</i> , towards Maidan Kach. There is a small stream of good water near the mouth of the <i>nala</i> . The supply increases further up. At 13 miles arrive in camp at Maidan Kach. No village. Camping-ground stony in places. The camping-ground is in a broad space where the <i>nala</i> widens, and is shut in by low hills. Water abundant in the river bed. Camel-grazing and fuel scarce; no grass.
2	BARAKSIA ...	13½	26½	On leaving camp the road goes up the river bed, where there are numerous pools of water. The bed of the <i>nala</i> is narrow in places with steep cliffs on either side. The going is good for camels. At 3 miles the road leaves the river bed to the right, in order to take a short cut, to join it again about 1 mile on, the river making a big bend to the west. Camels should keep to the <i>nala</i> , as the short cut is rather steep. At 4 miles again rejoin the bed of the <i>nala</i> , following it for 1 mile. The <i>nala</i> bed is stony, and there is some water in pools. At 5 miles leave the river bed finally, following a well defined camel path which winds east and north-east, keeping to the right of a small watercourse. The road follows this track for 4 miles, when the head of the valley is reached. A peculiar conical peak called Yogwash, which has been straight ahead for some time, is left to the right; the road, which is now difficult and runs over broken ground, leads round to the left of the Yogwash range. At 13½ miles the camping-ground of Baraksia is reached, at the foot of the Yogwash range. The column had to keep in single file most of the way during this march. The camping-ground is good, ¼ mile long by 250 yards broad, but the water is scarce and brackish. There is a small spring in the rocks about 1,000 yards from camp sufficient for drinking purposes, whilst there is water in the <i>nala</i> below the camp for animals. There are no supplies except some grass in fair quantity, and abundant camel-grazing near the camp. Plenty of fuel can be obtained a short distance from camp.
3	HAODAK ...	9½	36	The road, on leaving camp, goes into a <i>tangi</i> which winds about for 3 miles. The going is bad, being over stones and rocks, but the <i>tangi</i> is sufficiently broad to enable laden camels to pass. At 4 miles the road reaches the top of the <i>kotal</i> . The descent from it to the plain below is rather steep and very difficult for camels. The column had to march in single file most of the way. The road follows the Khaisor <i>nala</i> bed in a north-east direction down into the plain, crossing and recrossing it several times. The road runs in a north-east direction to 9 miles, when a low hillock is reached which stands out alone on the left. Immediately behind this hill, and about 600 yards away from it, are 3 small wells of excellent water, about 500 yards distant from one another. At 9½ miles Haodak camp is reached.

Route No. IV.
FROM THANISHPA TO HUSAIN NIKA ZIARAT *via* THE CHUKHAN VALLEY.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
1	NIGANGE OR NIGANDI.	17	17	From camp at Thanishpa road goes down valley about north-east, at one mile descending into hilly ground, and ¾ mile further enters <i>nala</i> 40 yards wide, direction now east. At 2¼ miles leaves <i>nala</i> and enters narrow valley or ravine 200 yards wide, half a mile further crossing low ridge on left and entering a rocky ravine which opens out a little at 3 miles, where the commissariat camp was pitched. Water from 3 shallow pools in bed of <i>nala</i> . Follow this <i>nala</i> to its junction with a larger one, crossing which the path runs up a small narrow watercourse joining in from the north, thence along its left bank for some little distance and again into the bed, here very narrow (6¼ miles). This part of the road was improved for about 50 yards by the sappers. After ¼ mile of narrow ravine, reach top of Shin Narai Kotal (7,450'); path now rapidly descends in a westerly direction, gradient about 15°; animals can only go in single file. After about 250 yards of steep descent path follows watercourse for a short distance and then goes along left bank, striking the watercourse again about 1 mile from top of <i>kotal</i> . Pass begins here to open out a little, and stone enclosures seen on the left. Turning round north-east down this watercourse with steep knife like crags on both sides at 10 miles pass 3 cairns or stone heaps in the <i>nala</i> , and a few hundred yards from this point path leaves <i>nala</i> and goes to the right. One might also follow the <i>nala</i> , but this would lengthen the march by perhaps ½ a mile or more. Cross level ground for about ¼ mile and enter a <i>nala</i> which drains north towards the valley. Height by aneroid at this point 6,700'. Path now crosses this valley in a north-east direction; at 12¼ miles reach dry watercourse, lowest part of this small valley; height by aneroid 6,450'. At 13¼ miles pass cemetery on left hand close under low ridge, and ¾ mile on pass a well of good water, 6 feet from surface of the ground. Path now follows sandy watercourse passing conspicuous cairn on right and some shepherds' enclosures on left, and a mile further crosses low sand ridge; going here very heavy till camp is reached at Nigange on the Kundar, distance 17 miles. It appears that Nigange is the name given to this part of the Kundar. It is known by the latter name lower down. Camp is on right bank. Ground undulating but firm. Wood, grass and camel-grazing abundant. Water clear and plentiful, but somewhat brackish. The bed of the Kundar is about 250 yards wide here and white with salts. The first 8 miles of the march somewhat difficult for camels, the last 9 trying for infantry.

ROUTE No. IV—*contd.*

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
2	DHOLESAR ...	10½	27½	Cross Kundar stream and march over plain in north-east direction, as if making for Wazanaghar and about 1¼ miles from camp strike well marked track and continue along this, striking the Kundar again at the third mile. Descent easy, breadth about 200 yards. Path now crosses a bare plain. At 5 miles cross <i>nala</i> and ascend opposite bank, path leading through ridges of bare rock. Thence along small plateau and along undulating sandy ground in an easterly direction. At 6 miles for ¾ mile the road is bad, but can be made practicable for camels. Thence the road descends gradually into a valley, crossing the stream (Tora Mu) at 9½ miles. Good water to right of road. Thence across small plain for one mile to camp. Camping-ground on both sides of stream. Ground good and unlimited. Water brackish but plentiful. A little fuel and camel forage. Height by aneroid 6,270'. Marching generally easy with exceptions noted. Baggage took 5½ hours on road. No village or supplies.
3	SANZI WAR OR SAN-DEH WAR.	21	48½	Path crosses stream and goes along a narrow valley north-east; at 4½ miles crosses dry <i>nala</i> and thence enters a small valley similar to the first, thence on to a stony broken plateau. At 7 miles enters long valley enclosed by high ridges, road easy; at 10½ miles a sort of <i>tangi</i> goes through the range on the right, carrying off the drainage of this part of the valley. There is here a good deal of thorn bush and several wild pistachio trees, and it looks as if water was not far from the surface. From this point the valley begins to ascend gradually, and at 11½ miles the Shagana Kotal is crossed, the water draining away from this to the <i>tangi</i> above mentioned. Aneroid height 6,790'. Road continues along this valley now descending, and about ¾ mile further a deep watercourse issues from the range or ridge on the left, into which the road descends at 13½ miles. Here we met a few Ghilzais with several donkeys. They came from Kalat-i-Ghilzai and were making for the lower Zhob valley to winter there. The watercourse bends round east through a gap in the ridge on the right, a little water in the bed, with steeply scarped banks, and winds considerably. The road now follows this stream, called the Sanzi through the range, in a south-east direction along the bed and over the banks till it enters the Chukhan valley at 21 miles; it then ascends the right bank on to a stony and gravelly plain where is the halting-place called Sanzi War. Water from pools in the bed of stream, slightly brackish, but under a large rock in the bed is a muddy-looking pool of rainwater which is quite sweet. Camping-ground on right bank, unlimited in extent and good soil. A little thin tamarisk in river bed. Aneroid height 6,160'. Camels took 9½ hours.
4	AMBARA. ...	19	67½	Keep along valley (Chukhan) on right bank of Sanzi <i>nala</i> , here dry, and at 2½ miles cross it. Road now goes along the Chukhan valley keeping close to the foot of low ridges on the left (northern) side. General direction of the whole march north-east. At 5 miles road descends into more broken ground and runs along a small valley. At 7½ miles is a cemetery and a little beyond, to the left in the hills, is a hamlet. No water nearer than the Chukhan, 1 mile to the right. At 10½ miles cross a small stream coming from the left. At 17 miles <i>nala</i> . At 18 miles come to end of a long street-like valley, and cross the Chukhan, which here has some water and tamarisk in its bed. Path thence ascends the opposite bank and cuts off a bend in the stream, striking it again a mile further up. The camping-ground is on opposite bank. Camping-ground good, for one regiment; there is more ground on the other side but somewhat broken. There is nothing to mark the place but a cemetery and a few huts. Arrangements should be made beforehand for fuel and grass. Water abundant and fairly good.
5	SHARAN ...	6	73½	Road now leaves the valley of the Chukhan and ascends the bed of a stream called the Sharan, rough and stony. At about ¾ mile the road to Uzhda Wazha is passed. It runs up a narrow valley north-north-east, and the village is about 5 miles distant. At 2 miles pass some deserted caves.
Camping-ground small. Water good.				
6	GUSTOI WAR ...	17	90½	The road, after leaving camp at Sharan, ascends gently the Sharan <i>nala</i> for 6 miles, rather rough in places, but presenting no difficulty for laden camels till the Sharan or Narai Kotal is reached. The <i>nala</i> narrows considerably near the kotal. There is some water at 3 miles about ¼ mile off the road on the left. The kotal was descended by a road constructed by the troops the day before. Previous to its construction it would have been impossible to pass over laden animals of any sort. The soil through which the road is cut is shale. The steepest part of the descent lasts for ¾ mile, the road made by the troops for 1½ miles, after which it becomes fairly easy for a mile or so, when it is again very rough, narrow, and difficult, and there is a second rather steep descent. At about 10 miles it becomes easy again. At 11 miles two very narrow <i>tangis</i> like doorways are passed, and shortly after water begins to appear in the bed of the stream. At 13 miles passed a few fruit trees, remains of a Mando Khel village, and shortly afterwards a few deserted huts. At 14 miles enter the bed of the Gustoi stream where is a plentiful and good flow of water. The road follows the <i>nala</i> for a short way and then turns up to the left over a plateau and down again into the stream, close to the camp which lies at the junction of the Gustoi and Kundar streams. Ascent and descent steep. The first camels commenced crossing the kotal at about 8 A.M., the last reached camp at midnight. Camping-ground on firm clay surrounded by steep cliffs from 100 to 150 feet high, large enough for a brigade; other camping-grounds are to be found further up the bed of the Kundar. Water good and abundant from Gustoi stream. Grass procurable from the neighbouring hills, also fuel.
7	HUSAIN NIKA ZIARAT. ...	8	98½	Leaving camp the valley is followed in a north-north-east direction. It is here ¼ mile broad. The country to the left belongs to the Khoidad Khel section of the Suliman Khel, and the hills on the right are inhabited by a small <i>Saiad</i> community, who have charge of the <i>ziarat</i> of Husain. At ½ mile the direction changes to north-north-west, soon after to north-north-east and later on to east-north-east,

ROUTE No. IV—*concl'd.*

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
				the general direction of the march however being east-north-east. At 2 miles the Uzhda <i>nala</i> comes in on the left. This is dry at its junction with the Kundar. Up this a road leads to Do China, said to be 2 marches distant, and on the banks of this <i>nala</i> there are said to be five or six Sangar Khel villages of Suliman Khels, the headman being Shah Zaman. From here the track continues down the <i>nala</i> bed, which is sandy and covered with boulders, and the stream has to be crossed and re-crossed. This is the general character of the whole of this march, which is bad going for men and animals. The average breadth of the Kundar river is now $\frac{1}{2}$ mile. At $3\frac{1}{2}$ miles a small <i>kach</i> is passed on the right called Tori Kach. At $5\frac{1}{2}$ miles a branch <i>nala</i> comes in on the left named Khaisor Grezha. At the head of this <i>nala</i> , a few miles up, are said to be several small villages belonging to the Khoidad Khels, the headman of these being Daria Khan. $2\frac{1}{2}$ miles further on, the track still following the bed of the Kundar, the camping-ground at Husain Nika Ziarat is reached. This is a level piece of ground, on which there are several graveyards and also the celebrated <i>ziarat</i> of Husain. Camping-ground is on right bank of Kundar and is sufficient for a brigade. Grass is obtainable in the neighbourhood of the camp. Wood and camel-grazing are both scanty. Water is obtained from the Kundar stream ample in quantity, but salt and bitter. No other supplies are procurable. Height of camp 3,700'.

Route No. V.

FROM THANISHPA TO HUSAIN NIKA ZIARAT *via* THE KUNDAR RIVER.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
1	NIGANGE ... OR NIGANDI.	17		See Route IV.
			17	
2	KALA MULLA KAMAL	12 $\frac{1}{2}$		Immediately on leaving camp the road crosses the Kundar and runs in an east-north-east direction across the valley to the foot of the hills on the northern side. This is heavy going. The soil is sandy and covered with low scrub and grass. At 4 miles, the foot of the hills called Wazana-ghar is reached. Here there is a conspicuous cairn passed on the left. From this spot the track follows the foot of the Wazanaghar over rocky ground, intersected by small ravines. This is not good going for baggage animals, although no real difficulties are met with. At 7 miles, and 1 mile distant in a south-east direction, the Skhalwai <i>nala</i> joins the Kundar. At $7\frac{1}{2}$ miles, the track continuing along the foot of the hills, some temporary villages of the Lowanas (now deserted) are passed. At 8 miles the Kundar approaches the hills and the track passes within 200 yards of the river bed, but almost immediately leaves it and turns in a north-east direction. At 9 miles a small <i>nala</i> has to be crossed, and here some ramping is required as the descent is very steep. The road continues along the foot of the hills, where the strata are tilted up on end, forming curious knife-edged bands of sandstone rising from the ground. At 10 miles, more deserted temporary dwellings of the Lowanas are passed, and at 11 miles, and $\frac{1}{2}$ mile to the left of the road, a small permanent Lowana village called Kala Mulla Kamal, at the foot of the hills, is passed. This village contains 6 or 7 houses, a little cultivation and a few trees. There is a limited supply of water, and this appears in a small <i>nala</i> lower down, where it is crossed by our track. At 12 miles the road again strikes the Kundar, and $\frac{1}{2}$ mile further on the camping-ground is reached, on the left bank of the stream. General direction of march north-east. The people about here are Lowanas. Although not a Kakar race, they are included in their limits and pay revenue to the Jogizai Kakars. They are said to number only 230. There is an alternative road to that traversed by the force, and that is along the Kundar bed. This appears to be preferable to the one traversed, though a trifle longer. It has the advantage of being less stony and has water, more or less, the whole way; whereas the other road has hardly any water. At Kala Mulla Kamal there is firewood and grass, but no supplies. Water is abundant in the <i>nala</i> , but slightly brackish. There is camel-grazing near the camp. There are no permanent villages except the small village of Kala Mulla Kamal 2 miles from camp. Height of camp 5,870'.
			29 $\frac{1}{2}$	
3	NAKHAL OR SPOLE LOARA	15 $\frac{1}{2}$		Leave camp in north-east direction and follow the bed of the Kundar. At 1 mile turn north-north-east. The track follows the bed of the <i>nala</i> , which is nearly a mile broad. It is heavy going over sand and stones. There is a large quantity of tamarisk, and water is crossed several times. At $4\frac{1}{2}$ miles the river bed crosses over to the north of the valley, and this the track follows in a north-north-east direction, reaching the foot of the hills at 6 miles and then skirting along it. At 7 miles river bed goes through a narrow passage some 30 yards broad with perpendicular sides. From this point the <i>nala</i> curves to the right, but the track leaves it and keeps along the foot of the hills in a north-east direction, until at 9 miles it again rejoins the bed of the stream. Baggage animals had better keep to the <i>nala</i> instead of going this way. From 9 miles the track follows the Kundar, and at 11 miles the Wali Murgha road comes in from the left from Tirwah. The route continues to follow the Kundar bed, which is now bare and sandy, the tamarisk jungle having disappeared. At 15 miles reach camp Spole Loara. Here the Kandil joins the Kundar, coming in from the west. General direction of march north-east. This march is a trying one for infantry, as it is heavy going over sandy soil nearly the whole way. The camp here was pitched on the left bank of the Kandil, just above its junction with the Kundar. The former contains a stream of running water. Supply plentiful, but muddy and slightly brackish. The Kundar has numerous pools of water along this march, and there is also grass and camel-grazing,
			45	

ROUTE No. V—conclld.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	

At Spole Loara no supplies are obtainable, and grass, firewood and camel-grazing are scarce. When the force was here large flocks of sheep and goats belonging to Safis were passing through to their winter grazing-grounds in Zhob; but at ordinary times sheep and goats could be procured, if notice were given. Height of camp 5,450' (aneroid). From this place the caravan route to Ghazni goes *via* the Kandil. The Safis who had just come down from Nawa gave the following marches from Spole Loara or Nakkhal, as this place should be called—

- (1) Parjan (Sultan Sapparai).
- (2) Prekara.
- (3) Godawana.
- (4) Tirwah.
- (5) Karbora.
- (6) Nigandi.
- (7) Spedar.
- (8) Sakira.
- (9) Nawa.

Water is obtainable at all these places, but at Godawana it is scarce.

4	SARA DARGA	...	11	56	Leaving camp in a north-east direction the track runs for 3½ miles over a hard stony plain, which is good going. The valley has been gradually becoming more narrow, and at 3½ miles the road enters a <i>tangi</i> , which 2 miles further on meets the Kundar. There is a route by the Kundar itself, which
<p>is said to be more difficult. The going in the <i>tangi</i> is bad for pack animals over boulders and rocks, and at 5 miles water makes its appearance. A little beyond this the narrowest part of the <i>tangi</i> is reached. Here it is about 15 yards wide with steep precipitous sides, and at one spot there is a passage six feet wide between two large rocks. At 5½ miles the road again enters the Kundar valley down which there is a considerable stream of running water. The valley has become a little more open; but there are still hills on either side shutting in the valley. At 6 miles a <i>nala</i>, in which there is good water, comes in on the left. Up this there is said to be a road to Do China belonging to the Suliman Khels. The direction is now east. The valley winds about, and at 7 miles goes in a south direction. It has now opened out, and at 7½ miles it is 100 yards broad. The track crosses and recrosses the stream, the water of which is muddy and brackish. The depth is not more than 1 foot. The going is bad for men and animals. Sand alternating with boulders and rocks. At 9 miles the valley has widened to ¼ mile and its direction is east. At 9½ miles a small stone enclosure is passed. This is called Nama Khanai (navel stone). Here the valley is ½ mile broad, and the road is good going, the ground being hard and free from large stones. Several graveyards are passed about here. At 10 miles the open valley is reached, and the direction changes to north-east. The camping-ground, which is near a conspicuous mound in the centre of the valley, being reached a mile further on. The Kundar valley is here about 1 mile broad, and is open and level. The Kundar itself runs along the foot of the hills on the north-west side of the valley, and the camp was on the right bank of the stream. General direction of march east by north. The name of this camping-ground is Sara Darga, but there is no village on the spot. There are, however, 2 or 3 small Mando Khel villages in the hills to the south-east. From Sara Darga a track is said to run south to the Chukhan, but this is reported to be fit for footmen only. Supplies are not obtainable, except sheep and goats, which could be purchased from the Mando Khels. Firewood and grass can be obtained after notice, but it is scarce, camel-grazing is also scanty. Water is abundant in the Kundar, it is slightly brackish, but better than in the last two camps. Height of camp 5,050' (aneroid).</p>					

5	SARMAGO KACH	...	12½	68½	Leave camp in a north-east direction over Sara Darga plateau, which is stony. There are several graveyards scattered about, belonging to Mando Khels. At 2 miles there is a short steep descent into the Kundar bed, and the road continues along the <i>nala</i> over sand and boulders. At 3 miles the valley has narrowed, and the bed of the stream runs between hills not more than 70 yards apart. The rest of the march the river remains confined between hills, although these open out in places, and <i>kaches</i> are found. At 3 miles the direction is changed more to the east, and the <i>nala</i> winds about among low hills. At 5 miles Barara Kach is passed on the left. This is a small <i>kach</i> belonging to the Nasars. Speaking generally all the country on the right belongs to Mando Khels, who have a few scattered hamlets on the hills; and the hills on left belong to the Nasirs who use them as grazing-grounds. At 6 miles some warm sulphur springs are passed. The water of these is very salt. This place is called Khut Kundar. From this spot the track leaves the bed of the <i>nala</i> , and strikes off over the hills to the left in a direction north-east by north, and does not rejoin the bed of the Kundar until 7½ miles. Here the road crosses the stream and runs in a northerly direction over level ground on the left bank of the Kundar for a mile. This is known as Isar and belongs to the Mando Khels. At 9 miles a solitary rock is passed which stands up in the valley and looks like a miniature of one of the Colossi at Thebes. This place is called after the rock Lakka Tezha, and belongs to the Mando Khels. Here it is said the Nasar limits end on the left side of the valley, and Suliman Khel territory commences, but others place the boundary between the two further north. The direction is here north-east, but the <i>nala</i> winds about and the direction changes continually. At 12½ miles Sarmago Kach is reached, on the right bank. This belongs to the Mando Khels and is a level stretch ½ mile by 300 yards running east and west. It forms a good camping-ground for a small force, the ground being hard and free from stones. It is cultivated when the Kundar is in flood. This march is bad going for men and animals. It is for the most part in the bed of the Kundar which is covered with sand and boulders. General direction of march north-east. Supplies at this camp are limited. Camel-grazing and fuel are scanty, but grass can be obtained from the hills around. Water abundant from the Kundar, but brackish. Sheep and goats could be obtained from the Mando Khels; no other supplies.
---	--------------	-----	-----	-----	---

6	HUSAIN NIKA ZIARAT	...	10	78½	Leaving camp in a northerly direction the track follows the bed of the Kundar, which is here about 150 yards wide. The river winds about between hills. At 2 miles pass Gustoi War on the right. This is at the mouth of the Gustoi stream. From here the road to Husain Nika Ziarat is the same as that described in the previous route.
---	--------------------	-----	----	-----	---

Route No. VI.

FROM HUSAIN NIKA ZIARAT TO APOZAI *via* DOMANDI AND GARDANI.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
1	DOMANDI ...	8½	8½	Leaving the camping-ground near the <i>ziarat</i> of Husain enter the hills immediately to the south-west and ascend by a steep track. At ¼ mile reach a <i>kotal</i> 250 feet above the camp. This ascent, though short, is difficult, and it took the camels two hours to get up it. There is another way said to

be easier though longer, and there is an alternative route along the bed of the Kunder; and it is probable that this last is preferable to either of the other two roads. Before again undertaking this march a careful reconnaissance should be made of the different routes. From the *kotal* after a short and gentle descent the track runs over the plain in a north-east direction. This plain, which is open, and is called Manzaraguna, stretches away from the Shinbaza Kotal on the right to the other side of the Kunder river on the left. This plain belongs to the Nasars, but owing to their dread of the Suliman Khel, they do not go there, the Suliman Khel using it occasionally as a grazing ground. At 3 miles the track drops down into the bed of the Inzara Khwar. This, with its branches, drains the Manzaraguna plain. It was quite dry, but some water was found in its bed near the place where Colonel Nicolson's column halted. After 3 miles the track follows the Inzara *nala* in a north-east by east direction. The *nala* is a deep cutting through conglomerate, with high perpendicular sides, and has a width of about 100 yards, narrowing at 5 miles to about 30 yards. If there is likelihood of opposition a force should not move by this route without the sides of the *nala* being crowned. Several feeders come into the Inzara *nala* on the right, and at 6 miles the Inzara itself joins the Kunder. Just before this junction, a spring called Sasandai is passed on the left, the water from which is excellent. From 6 miles the track follows the bed of the Kunder in a north-east direction to Domandi, which is reached at 8½ miles. The Kunder here is from ¼ to ½ mile broad. The stream has to be crossed several times, and the going is heavy over sand and stones. At Domandi the camp was pitched on the right bank of the Kunder close to its junction with the Gomal which here joins it from a north-west direction. The country on the left bank of the Kunder throughout this march belongs to the Suliman Khel. The camping-ground at Domandi is in the bed of a *nala* and is sandy. There is room for a considerable force. Water is abundant from the Gomal or Kunder and should be taken from the former for preference. Wood and grass are obtainable from the adjoining hills, but camel-grazing is scanty. Sheep and goats could generally be obtained from the flocks grazing in the neighbourhood. No other supplies are obtainable as there are no villages or habitations of any sort near Domandi. General direction of march north-east. Height of camping-ground 3,375' (aneroid).

2	KURMA ...	10	18½	Leaving the camp in an easterly direction, follow the bed of the Gomal (which has now been joined by the Kunder water). The valley is here shut in by perpendicular cliffs. At 2 miles it opens out to nearly a mile broad and Maricho Kach is passed. This belongs to the Nasars, but is not cultivated by them through fear of the Suliman Khel. After passing Maricho Kach the valley narrows again, and at 3 miles is only 150 yards broad. Here the direction is east-south-east. On the left is the Zarmelan plain and on the right Manzaraguna, the same plain that was crossed during the previous march. Both of these are claimed by the Nasars, but they do not occupy them on account of their enmity with the Suliman Khel. The latter, however, come down here with their <i>kiris</i> in the winter to graze their flocks. At 4½ miles valley again begins to open, and at 5 miles Gul Kach is reached. Up to this point the stream has to be crossed and recrossed several times and the going is bad for men and animals, the bed of the <i>nala</i> being sand and boulders. The stream is now a strong current with deep pools in places and the river cuts through a sort of half formed conglomerate. Gul Kach is a long stretch of open ground intersected by the stream. It is about 4 miles long, and at its widest part one mile broad. It is stony and covered with long coarse grass. It is claimed by the Nasars, but, for reasons given above, is not occupied by them. The track crosses Gul Kach diagonally in an easterly direction, and at 7 miles reaches the right bank of the river bed. The track then continues in the same direction (east) over a level plain which skirts the river bed and has an average width of ½ mile. This plain is known as Kanzur. The track runs over this to 9½ miles, when a graveyard is passed on the right and the valley then opens out, and ½ mile further on the track again strikes the Gomal. This place is called Kurma, and here the camp was pitched. It is at the mouth of the <i>nala</i> of the same name. There is no village here, nor anywhere along this march. The Nasars own the land on the right bank of the stream, and the Zalli Khel and Dotanis inhabit the hills on the opposite bank. The former are Darwesh Khel Waziris, and the latter Pawindahs. The Zalli Khel live in these hills all the year round, but the Dotanis go up towards Kabul in the summer, leaving only a few of their number behind to look after the crops, &c. At the camp at Kurma there is abundant and good water from the Gomal. Grass is plentiful, wood is obtainable in the vicinity, and there is a small amount of camel-grazing but not much. No other supplies, except perhaps sheep and goats, are procurable. General direction of the march east. Height of camp 2,950' (aneroid).
---	-----------	----	-----	---

3	GARDANI ...	18	36½	On leaving the camp at Kurma the track crosses the open plain at the mouth of the Kurma <i>nala</i> in a southerly direction, leaving behind the Gomal river. At one mile the path crosses a small <i>nala</i> in which there is much grass. The track then runs over stony undulating ground until at 3 miles it drops into the bed of the Kurma <i>nala</i> . This is here about 150 yards broad and is quite dry. The track then follows the sandy bed of the Kurma in a south-south-east direction. At 3½ miles water in two small pools is passed under the left bank of the <i>nala</i> . This water is good. At 4 miles the direction is south by east, the track still following the bed of the Kurma. At 4½ miles the <i>nala</i> narrows to about 40 yards and the direction changes to south-south-west, and although the <i>nala</i> winds about a good deal, this remains the general direction for the next 5 or 6 miles. After 4½ miles the <i>nala</i> continues to be confined between hills up to 7 miles. Here it begins to open out again, and at 8 miles the track is running over an open valley nearly a mile broad on which there is much grass. At 10 miles the watershed between the Gomal and Siritoi is reached. The height here is 3,600' (aneroid). The track then runs across the open Gardao plain in a south-east direction for 3 miles and then south-south-east for 2 miles. This plain is quite level and
---	-------------	----	-----	---

ROUTE NO. VI—*contd.*

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	

covered with grass, chiefly *dub* grass. Like the valley of the Kurma, the Gardao plain is almost deserted, owing to fear of Waziri raids. The land properly belongs to the Mando Khel, but the only people who frequent these parts are the Suliman Khel who use this as a grazing-ground in the winter. There is no water on the Gardao plain, but after rain it collects in pools, and water is said to be obtainable in the neighbouring hills. At 15 miles the track drops into the Gardani *nala*, which drains the eastern side of the plain, and follows the bed of the *nala*, which here enters the hills in a south-east by south direction. At 15½ miles the Gardani has narrowed to 150 yards with precipitous hills on either side and the track follows its bed, which winds about among the hills in a general south-east direction, until the camping-ground at the junction of the Gardani with the Siritoi is reached at 18 miles. Here there is water sufficient for a brigade, in pools in the bed of the Siritoi. There is no water passed during this march except at the one place already mentioned 3½ miles from the last camping-ground. The march although long is fairly good going; the only parts that are heavy are those where the track follows the bed of the Kurma or Gardani *nalas*. The general direction of the march for the first 10 miles is south-south-west, for the last 8 south-south-east. There is an abundant supply of grass all along the route. The camping-ground at Gardani is on the right bank of the Siritoi among tamarisks. Here there is an abundant supply of grass. Wood and camel-grazing obtainable in the neighbourhood. No other supplies procurable, but these could be sent out from the Mir Ali Khel post which is about 3 miles distant. The hills round belong to the Mando Khel, who are British subjects. There is no village at this camp, nor are any passed along this day's march. Height of camp 3,450' (aneroid).

4	SAPAI ...	9½	46	Leave camp at the junction of the Gardani and Siritoi streams and follow the bed of the latter in a south-east direction for 1½ miles to its junction with the Zhob. The Siritoi, from the camping-ground to its mouth, contains a small stream of clear water. The hills through which this
---	-----------	----	----	--

nala runs gradually open out as the Zhob is neared, and the *nala* is about half a mile broad at its mouth. From this point the post of Mir Ali Khel is distant about 1½ miles in a north-east direction. This post occupies an admirable position to watch the Zhob valley and the entrance to the Siritoi, and will allow the Mando Khel to cultivate their lands, which before they were afraid to do owing to their turbulent neighbours, the Waziris on the north, who were constantly raiding on them. The road from the mouth of the Siritoi runs up the bed of the Zhob in a south-south-west direction, but turns more south soon afterwards. The general direction to the camp at Sapai being almost south. The Zhob, where it is joined by the Siritoi, is ½ mile broad, and the valley is enclosed by high hills. This is its character to within about 2 miles of Sapai, where the valley opens out a little and the hills are not so steep. The bed of the Zhob here is covered with tamarisk and grass, and these are obtainable throughout the march. The track crosses and re-crosses the stream, which has a rapid current, and is as much as 2 feet deep at some of the crossings. At 5 miles the Uzda Khwar comes in on the right (left bank of the stream), and on the opposite side the Lundai Khwar joins the Zhob. At 6 miles the Barar Khwar comes in on the left, and several smaller *nalas* join the Zhob during this part of its course. None of these, however, are important, as no roads lead up them and the only use they serve is as grazing grounds for the camels of the Mando Khel. At 6½ miles rice cultivation is met with on the left bank of the stream, and a mile further more is found. This rice cultivation belongs to the Mando Khels, and they have some houses, now disused, to look after it. At 8 miles pass the new road from Apozai to the Gornal. It here runs above flood level on the right bank of the Zhob. At 9½ miles the camping-ground at Sapai is reached. Here there is no village nor habitations of any kind, but there is a deserted redoubt used by Mando Khels to protect their crops. The camp was pitched on ground used for rice cultivation, at present quite dry. At Sapai camel-grazing and grass are abundant. Firewood is also obtainable. The supply of water is practically unlimited from the Zhob stream, on the right bank of which the camp was pitched. No other supplies are procurable. Height of Sapai 3,600' (aneroid).

5	BRUNJ ...	15	61	On leaving camp the road proceeds across a stony plain for ½ mile, where the new road is met, which is then followed. This road was made at the beginning of 1890 during Sir Robert Sandeman's expedition. The road is now being re-aligned and converted into a really good camel road 12 feet
---	-----------	----	----	---

broad. The direction of the road is generally south, and a gradual ascent is made round the spurs of the hills on the right bank of the Zhob to 2½ miles. At this point is a small Mando Khel village called Khatol Kot containing from 10 to 20 houses. The height of this point is 3,900' (aneroid). From here the road turns south-east descending for a short distance and then re-ascending the hillside until at four miles the highest point is reached 3,850' (aneroid). From here a descent is made to open ground on the right bank of the Zhob. The road runs over this for ½ mile and then enters some low hills and winds about for ½ mile, when a broad stony *nala* is reached at 5½ miles and a temporary Mando Khel village is passed on the right. The Zhob is now left behind and the track runs up this broad *nala* (which comes down from Shinghar and drains the northern part of the Haripal country) for 2 miles in a south-east direction. At 7 miles a small Mando Khel village with two towers called Nili is passed on the left. At 7½ miles a gentle ascent is made to a *kolal* which is passed at 8 miles (height 3,950'). From here the road enters the head of a small *nala* and winds about among low hills for 3 miles. General direction south-south-west. At 11 miles a small well of water is passed, and the *nala* here opens out and the made road is again met. This had almost disappeared throughout the previous 3 miles. At 11½ miles the Zhob is again seen about 1 mile distant. From here the road runs behind some hills on the right bank of the Zhob, and at 14 miles drops down into the valley again. Passing the village of Brunj and crossing a wide *nala* known as Bailol, the camping ground is reached at 15 miles. Brunj is a Mando Khel village. It contains 60 houses and has two towers. The Bailol *nala* where it meets the Zhob is dry, but when rain falls the drainage of the south part of the Haripal country comes down it. There is a good deal of cultivation about Brunj, and all along the river between Sapai and Brunj where there is any space rice is cultivated and a considerable quantity would appear to be grown. The road throughout the whole of this march remains on the right bank of the Zhob. The camp is here pitched on the same bank. The new road when finished will make this march shorter, as it is being constructed along the river instead of making a long detour as it does now. At Brunj grass is obtainable, also firewood and camel-grazing in the neighbourhood. Rice is also procurable from the village, but no other supplies can be obtained in any quantity. Numerous sheep and cattle were passed on this road, and these could be purchased if notice were given. Water is good and abundant from the Zhob stream, except during the floods, when it is very thick and muddy. Height of camp 4,100'.

ROUTE No. VI—*concl'd.*

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
6	APOZAI OR FORT SANDEMAN.	13	74	On leaving the camping-ground at Brunj follow the new road which is now finished between Brunj and Apozai. The road skirts the sides of the hills and rises for $1\frac{1}{2}$ miles where it is 200 feet above the camp at Brunj. It then descends, and at $2\frac{1}{2}$ miles again reaches the river bank.

There is some rice cultivation on the opposite bank of the river here. The road then enters some low hills, and at $5\frac{1}{2}$ miles passes the villages of Mir Baz and Haji Ali, known as the Viala villages, on the left. There is a good deal of cultivation near these villages on the right of the road. This is principally rice, wheat and a little barley. Water is obtained from a *karez* and from small springs. From the Viala villages the road runs over an open plain south-south-west all the way to Apozai or rather to Fort Sandeman, the name given to the cantonment which is built $1\frac{1}{2}$ miles to the north-east of the village of Apozai. The drinking water here is now brought in by an open channel from the Silhaza stream and is not good. Pipes, however, will be laid down shortly at Apozai. Supplies of all kinds can be obtained. General direction of march south-south-west. Height of camp 4,450'.

Route No. VII.

FROM HUSAIN NIKA ZIARAT TO GARDANI *via* THE SHINBAZA KOTAL.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
1	INZARA ...	$3\frac{1}{4}$	$3\frac{1}{4}$	The road which is well defined goes in a south-east direction through some low clay hillocks and turns up a <i>nala</i> to the right, following it for about $\frac{1}{4}$ mile; it then begins to ascend a narrow <i>kotal</i> , rather trying for camels; top of <i>kotal</i> is about 150 feet above Husain Nika Ziarat; thence

the road descends on to a broken plateau called Surwakai on the north-east of the Speraghar mountain; at about $2\frac{1}{2}$ miles it leaves the plain and descends into a stony *nala* about 100 yards wide, descent rather rough but improved by sappers. Up this *nala* for about half a mile to a point where the Inzara *nala* joins in from the right (south-west). This is the usual halting place, but the only water lies about $1\frac{1}{4}$ miles up the latter *nala*. It is good and plentiful and after rain would no doubt be found nearer camp. Camping-ground on the plateau above the right bank, rather stony and undulating but sufficient for a brigade or more. The plateau is dotted with bushes of a long sort of broom, called in Pushto, *baravar*, which is very fair camel forage. There is also a little grass and *pish* (dwarf palm). A few flocks of sheep and goats seen grazing in the neighbourhood. Height by aneroid 4,275'.

2	GARDANI ...	$20\frac{1}{2}$	$23\frac{1}{2}$	Road goes along the bed of the main <i>nala</i> in a general direction of south-east till at 3 miles it enters low clay hills and by a narrow path ascends the Shinbaza Kotal, $\frac{1}{2}$ mile to the top; height 5,320'; grass and wild pistachio on the hills
---	-------------	-----------------	-----------------	--

around. A good view can be had from this point of the ranges on the far side of the Gardao plain, the Shinghar, Takht-i-Suliman, &c. The descent is easy, and the open plain is reached at $4\frac{1}{2}$ miles. Here on the right of the road is a small graveyard, and by it a path goes in a north-westerly direction to Nawa Oba and Apozai. Road now goes almost due east down a stony and gravelly plain with here and there a few sharp crags rising out of it. At 6 miles reach a small blackish stream in the bed of the Shinbaza *nala*, called by guide Qwottawe, which is also the name of this part of the plain. On the left (north) the plain is called Surwakai. From here road keeps to the right of the *nala* along the plain which is covered with tufts of sheep bitten grass; at $7\frac{1}{2}$ miles it goes through a low ridge or crag and again enters the plain; at 9 miles guide pointed out a grassy spot about a mile to the right of the road (south-west) where he said was a well of good water. At $10\frac{1}{2}$ miles cross dry *nala* full of coarse grass, where the column halted for an hour, thence still east on hard flat gravel till at $12\frac{1}{2}$ miles the road turns round a small hillock and goes in a south-east direction along the Gardao plain, here covered with short grass. The plain varies in width considerably, but it is nowhere less than three-quarters of a mile. This part of the plain appears to become at times a lake or swamp, for it is thickly covered with grass, reeds and here and there is small driftwood, which seem to indicate that periodically this part of the plain is under water. At $14\frac{1}{2}$ miles road changes direction to the south, and at $15\frac{1}{2}$ miles some stone enclosures are passed on the right; the valley here begins to decrease in width and at $16\frac{1}{2}$ miles road begins to enter a range of hills, following the bed of a watercourse called the Gardani. At the entrance this pass is about 250 yards wide with high craggy peaks on both sides. The path goes along the bed of this stream and over its banks to the camping-ground, which is reached at $20\frac{1}{2}$ miles and lies at the junction of the Siritoi coming from the west, with this stream. A good stream of water rises here and drains down the Gardani to the Zhub river. Camping ground good and extensive—some fine tamarisks lie along the Siritoi valley, and there is abundance of coarse grass and reeds. The former can be used for forage, but it is not good. This is Mando Khel country, but the inhabitants seem to live in a state of fear of the Waziris who raid here occasionally. A small plot of cultivation and a few fruit trees called Bagh watered by a good spring about 12 miles to the north-east of this camp has been abandoned by the Mando Khels as it appears to have been a perpetual source of temptation to their more powerful neighbours.

Route No. VIII.

FROM APOZAI TO DERA ISMAIL KHAN *via* THE CHUHAR KHEL DHANA.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
1	KAPIP KACH ...	8½	8½	See Route IX.
2	MANI KHWAR ...	15	23½	
3	SARGASA WASTA ...	7	30½	

steep *kotal* on the left; laden camels can only just squeeze through and the ascent is decidedly trying for them; this lasts for a few hundred yards; it then goes along a very narrow path cut into the side of the hill up to the top of the *kotal* which is reached at 2½ miles. Height by aneroid 5,875'. The top is open and commands a good view of the country towards the Takht range. This *kotal* or pass is called Da Khabaranai Narai. The road now descends by the watershed of a small spur to the bed of a ravine also called Khabaranai, and further down Umuk; this descent is very steep and very narrow; a drop of 225' in ½ mile, very trying for laden camels; ½ mile further is a small spring of rather brackish water in a *nala* on the right. At 4½ miles there is a large landslide blocking up all but the roadway. The sappers were put on this to widen the path; small stream of good water in ravine here; beyond this the sides of the ravine for a short distance are enclosed by enormous precipitous rocks almost overhanging; at 6½ miles ravine enters a long undulating plain called Loara, and the camping-ground is on a stony plateau on the left bank about ¼ mile from the mouth of the ravine. Water from small spring in a *nala* to the north of camp about 600 yards off. This is the nearest; there is some also about a mile back in the bed of the ravine; grass fairly plentiful, but not much camel-grazing. Fuel plentiful from wild olive trees which are to be found in all the watercourses about. There is a tower and some cultivation about 2 miles north-east of this called Sargasa Wasta (Chuhar Khel) with a good stream of water in bed of a watercourse. It was intended that the column should halt here, but it was too far off the road, and the existence of a spring so close to camp as 600 yards was not known to any one, not even the guide, and was discovered late in the day by accident. Height of camp 5,367'.

4	DHANA SAR ...	16½	47	From camp road goes into watercourse and across the Loara plain in a south-east direction; at 2½ miles a track goes off left to Wala. This plain is partially cultivated and there are a few huts; between 5th and 6th miles road crosses a stony watercourse covered with high coarse grass; it then makes for some flat ground on the left bank going between two low ridges for about ½ mile, then turning round in an easterly direction it makes for a gap in the range on this side of the Loara plain, and at 7 miles reaches mouth of this gap or pass; watercourse here is from 3 to 400 yards wide; on the left hand are several caves in the cliffs above, evidently temporary abode of shepherds; nearly 1 mile further the road twists round north east and continues winding in this way north and north-east to the camping-ground. The main range on the left hand is separated from the watercourse by smaller hills, but on the right at 14½ miles a high mountain wall called Torghar, some 10,000 feet high, comes down abruptly to the bed of the watercourse. The road is easy throughout, and runs for the greater part of the way along a shingly watercourse fringed with acacias and wild olive trees. Camping-ground for force on a small stony plateau above left bank somewhat cramped; the political camp was pitched on some fields on opposite side of stream. Water abundant and good from the head spring of the Chuhar Khel Dhana. Camel-grazing and fuel abundant; the former, from the numerous acacias on both sides of the watercourse. Grass obtainable from the hills. There is a small village here belonging to the Chuhar Khel, but supplies could not be reckoned on. A wide but dry watercourse called Garang joins the Chuhar Khel Dhana here; a mule path to Namar Kalan goes along it for some distance and ascends a stiff <i>kotal</i> at its head. Height of camp at Dhana Sar about 3,860'.
---	---------------	-----	----	--

5	MOGAL KOT ...	10	57	The road follows the bed of the stream called the Chuhar Khel Dhana (this drains the upper end of the Loara plain), passing two cultivated <i>kaches</i> on the right bank, on the first of which was pitched the political camp. The stream now enters the gorge; at the entrance it looks like a mere crack in the hills. At 1½ miles is a small waterfall, in the bed down which the only practicable path runs, ramped with rough blocks of stone. The pass is now very narrow enclosed with precipitous walls of grey limestone. At 3½ miles path runs over a small landslide from the cliffs on right bank, and crossing the stream goes along a narrow path which has been cut along the face of a long slab of limestone, sloping steeply towards the stream. At about 4½ miles, gorge again narrows to about 20 yards with precipitous sides; bed is shingly and afterwards stony; a few hundred yards further cross from right to left bank by a bridge made of large stones, branches and gunny bags about 4' wide, and at 5 miles reach mouth of the gorge, called Dhana War, and here from the left comes in a large <i>nala</i> , by which there is a mule path from Namar Kalan <i>via</i> Walwasta. The pass here opens out a bit for about ½ mile, and at the end of this is a small cultivated <i>kach</i> and one or two huts called Muhammad Jan. A large watercourse (dry) joins from the right, called the Garani Kal lending to the Zmarai country; it is said to be practicable for donkeys; from this point the pass again narrows with low accessible hills on both sides passing another cultivated <i>kach</i> , with a few huts called Baz Muhammad at about 6½ miles; thence going along the left bank the track passes a <i>kach</i> on the right called Babu Landai, and some hundred yards further another on the right called Nmanzgarai, which lies at the mouth of a watercourse called Sariobo coming down from the right. At 7½ miles the path runs along some high ground on left bank above water level; several acacias here and stones which require clearing;
---	---------------	----	----	--

ROUTE No. VIII—concl'd.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	

large graveyard here also; thence along the bed, rocky and shingly, in and out of the water to the halting-place above the right bank of the *dhana* reached at 10 miles. At $8\frac{1}{2}$ miles on the left bank are some petroleum springs, shallow pits dug in the sand and containing from 2 to 4 inches of petroleum very pure in quality, but scanty. However, boring might produce a larger supply. The camp was pitched on a sort of plateau some 250 feet above right bank; ascent very trying for laden camels, and the water had to be brought from the *dhana*. A small force would find more suitable camping-ground on the *kaches* which exist on both banks a mile or so further down the stream. A large amount of *jowar* still standing and there were some bullocks and flocks of sheep and goats. The first 5 miles of this road are very difficult for camels in its present condition, the pathway through the gorge lies chiefly along a very rocky bed between immense precipitous cliffs at least 800 feet high on either side, and the water is often 3 feet deep; it has been made just practicable for camels, but the whole march of $9\frac{1}{2}$ miles took the camels 9 hours; camel-grazing fairly plentiful, grass obtainable from the hills, *kirbi* from the village, and fuel plentiful. Supplies to a limited extent. Another road to Namar Kalan leads up a *nalu* on the left bank a mile lower down (see Route X). Both at the head and mouth of the gorge are several tepid springs. Height of camp 2,600'.

6	PARWARA	...	8			The road, after leaving camp crosses the river, and goes along a <i>kach</i> on the left bank for about $\frac{1}{2}$ mile in a northerly direction. It then turns east and drops into the bed of the <i>nalu</i> again. At $\frac{3}{4}$ mile is the small village of Harbora. The path leaves the river and goes to the left to avoid a <i>tangi</i> .
				65		

At 1 mile it again drops into the bed of the river and generally follows it in a north-north-east direction. At $2\frac{1}{4}$ miles pass the Chuhar Khel village of Baskai, on a cliff on the right bank of the river. The path continually crosses and re-crosses the bed of the river, but otherwise there is not much difficulty for baggage animals. At 6 miles the path ascends to a small *kach* on the left bank where there is much tamarisk and camel-grazing. The path continues along this *kach* which gradually widens out to about $\frac{1}{2}$ mile in width and reaches the camping-ground at Parwara about 1 mile short of the village of that name. Camping-ground sufficient for a large force. Water good and abundant from the river. Camel-grazing obtainable, also *khusa* and grass from the village of Parwara after due notice. A little firewood procurable. Height of camp 1,900'.

7	UCH SESTA	...	$11\frac{1}{2}$			Leaving camp the road descends into the river bed again, which is here about 150 yards wide and runs for a mile in a north-westerly direction. The valley narrows here, and the general direction is almost east for nearly a mile, the road still following the bed of the river. At $2\frac{1}{2}$ miles the
				$76\frac{1}{2}$		

road crosses to east bank of river and runs along a *kach*, cultivated in terraces, in a northerly direction. At $4\frac{1}{2}$ miles pass the village of Tangi Kuhna. At 5 miles again cross the river bed, and the road for $1\frac{1}{2}$ miles runs along the right bank over a sandy piece of ground covered with tamarisk and long grass. This piece is heavy going for laden animals. At $7\frac{1}{2}$ miles the road ascends to firm ground on the right bank of the river, running close to the foot of the hills gradually turning to north-east. At 9 miles the road descends into the river, crosses to the left bank, over a small *kotal*, and again descends into the river. At $9\frac{1}{2}$ miles is a *tangi* about 80 yards wide, the junction of the Khiddarwai and Chuhar Khel Dhanas. This is called Domandi. After the *tangi* the road follows the river east for 1 mile, crossing and re-crossing it several times. At 10 miles the road ascends a *kach* on the left bank and follows an easterly direction for $1\frac{1}{2}$ miles. The *kach* gradually broadening out to a breadth of $\frac{1}{2}$ mile at Uch Sesta. Camping-ground on left bank of river large enough for a brigade. Water good and abundant from the river. Camel-grazing procurable and also fuel. There is no village at Uch Sesta, but several graveyards. The whole march easy for baggage animals.

8	DRABAND	...	12			Leaving camp the road goes east, and descends into the river at $\frac{1}{2}$ mile. Thence it follows the bed of the river for $1\frac{1}{2}$ miles, winding about, but in a general north-westerly direction. The hills on both sides close in and the width of the river bed narrows to about 60 yards in places. At 2 miles
				$88\frac{1}{2}$		

the road crosses the river to the left bank and ascends a cliff about 20 feet high. Here the road leaves the river and goes across the *daman* of the hills in a north-westerly direction for 8 miles. The road is marked out by stones and the going is good. At 10 miles the road enters the cultivation and fields near Draband and is lost, but several paths lead into Draband itself. Camping-ground for a brigade. Water rather scarce, but supplies procurable. This is a post garrisoned by the Punjab Frontier Force. The whole march easy for baggage animals.

9	SAGU	...	16			} See "Routes on the North-West Frontier."
				$104\frac{1}{2}$		
10	KHULI	...	6			
				$110\frac{1}{2}$		
11	DERA ISMAIL KHAN		13			
				$123\frac{1}{2}$		

Route No. IX.

FROM APOZAI TO DERA ISMAIL KHAN *via* WALA, NISHPA AND DRAZAND.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
1	KAPIP KACH ...	8½	8½	Leaving camp in an easterly direction cross open Apozai plain keeping along the watercourse which supplies Apozai with water. At 1½ miles the Public Works Department road to Garda (Babar) is met, and the route then follows this road, which keeps generally to the Siliaza <i>nala</i> . At 5½ miles the watercourse running to Apozai is again met, and from here the stream flowing in the Siliaza has constantly to be crossed and re-crossed. On both sides of the valley here there is cultivation, chiefly rice and <i>makai</i> . There are several hamlets which belong to Mando Khels and Babars, who come down from the hills to cultivate the land. The principal of these is Hasanzai (Mando Khel) on the left. At 7½ miles leave the Public Works Department road which runs to the right to the Babar villages, and continue up the Siliaza <i>nala</i> for another mile, when the camping-ground at Kapip Kach is reached. Here there is a good stream of water in the bed of the Siliaza and a good camping-ground on fields situated on the left bank of the <i>nala</i> . Grass is fairly plentiful, and fuel is obtainable from the hills ¾ mile to the north. There are a few willows and mulberry trees on the camping-ground, and the hills round are covered with wild olive. Camel-grazing is obtainable in the neighbourhood. There is no village near, and no other supplies are procurable. The people who live about here are Kapips. They inhabit what is shown on the map as Kapip and about ⅓rd of Spasta. They are now British subjects. The hills to the north are inhabited by Haripals who call themselves <i>fukirs</i> . From their name they are possibly of Hindu origin. They only number 300 or 400 men. General direction of march east. Height of camp 5,156'.
2	MANI KHWAR ...	15	23½	Leaving camp in an easterly direction the track runs up the Siliaza stream for ¼ mile, and then follows a branch <i>nala</i> leaving the Siliaza on the right. The path follows this <i>nala</i> up the centre of the valley for 2 miles. This valley which is here about 5 miles broad is called Ujasar and is inhabited by Kapips. The hills on either side are covered with wild olive. The valley itself is open, but, except in the <i>nala</i> beds, there is hardly any grass or grazing. At the foot of the hills on the right there is a small village belonging to Kakar Khan, with a little cultivation, but there are said to be no other villages in this valley at all. At 3 miles the track leaves the branch <i>nala</i> which it had been following and runs over the plain east-north-east. At 9½ miles the entrance to the Atsu pass is reached. This is a low and easy pass about 1½ miles long, the height of the <i>kotal</i> being 5,750' (aneroid). From the top of this <i>kotal</i> a good view of the Takht-i-Suliman is obtained. At 11 miles the Spasta plain is entered, and 4 miles further on in an east-north-east direction over the plain, the camping-ground at Mani Khwar is reached. Barkhardar's fort is seen some 2 miles distant down the Spasta valley north-west of the camp. It is on the <i>kafil</i> road to India <i>via</i> the Zao pass (see Route XIV). There is ash, olive, &c., on the Atsu Kotal, and between there and Mani Khwar there is a regular forest of wild olive. At the latter place wood is abundant, camel-grazing and grass also are obtainable, but the water is only sufficient for a small force, at the most a brigade. The march is an easy one for animals, general direction north-east. Height of camp 5,610'.
3	WALA ...	12	35½	The track runs across the open plain for 5 miles in an easterly direction, then enters a <i>nala</i> and gradually ascends to a <i>kotal</i> known as the Usha Kotal (6,300') at 6½ miles. The ascent is steep but practicable for mules, and even laden camels. Beyond the <i>kotal</i> the track descends into a <i>tangi</i> and here the going is very bad indeed. The mules had great difficulty in getting along, and the road was impassable for camels. At 7½ miles the <i>tangi</i> is left and a steep <i>nala</i> running down to the Loara plain is crossed. Here there is a good supply of water. After crossing this <i>nala</i> the track ascends another range and the road runs over a <i>kotal</i> (6,270') at 8½ miles. The ascent is steep, but passable for mules with difficulty. The descent on the other side, about 1½ miles long, is very bad, but the mules managed to come down without any loss. At 10 miles the <i>nala</i> is reached up which the road to Wala from the Loara plain runs. Two miles further on, crossing a comparatively easy <i>kotal</i> , the first of the Wala villages is reached. Here the camp was formed. These are Uba Khel villages, but the Chuhar Khel have a share in them. There is a certain amount of cultivation, chiefly <i>makai</i> . At the village where the camp was pitched there was a tank of good water with a very small stream running into it. The supply was only sufficient for a small force of about 1,000 men. With the exception of a small quantity of <i>makai</i> , no supplies are obtainable. Grass is scanty. This was a very difficult march. The rear guard was not in till 18 hours after starting. No camels came with the force and the mules had to be unloaded and the loads carried over difficult places. Height of camp 5,940'.
4	GHAWAR GHAR ...	4	39½	The track runs above the villages of Wala, which are passed on the right, to the foot of the ascent over the Maramazh range. This place is known as Ghawar Ghar, and here there is water sufficient for a small force, which is good but difficult to get at, being between rocks in the <i>nala</i> bed. A bucket and rope are required to draw it up. Firewood is here abundant, but no supplies are obtainable. Height of camp 6,450'.
5	NAMAR KALAN ...	6	45½	This march is over the Maramazh range and is most difficult. The road is unfit for animals except country bullocks and donkeys, which can be taken over with much difficulty if unladen at the worst places. The ascent to the <i>kotal</i> is easier than the descent. From the camp at Ghawar Ghar the road at once ascends and winds up to the crest of the outer range which is reached at 1 mile. From here the road winds about gradually ascending until at 1½ miles the true <i>kotal</i> of the main range is reached (7,800'). The track does not cross this <i>kotal</i> , but leaving it on the right still ascends, and at 2 miles the crest of the range is reached (8,310'). From here there is a magnificent view of the whole country to the east. On the north the view is shut in by the gigantic mass of rock forming the Takht-i-Suliman. Shekh Budin and the Indus are seen in the distance, the latter winding like a silver thread along the whole front of the picture. Communication was opened by heliograph with Drazand to the north-east and with the force at the head of the Chuhar Khel Dhana to the south. The road, or rather sheep track zigzags down the almost vertical face of the mountain in a general north-easterly direction for nearly 2 miles. This is most difficult going and is impracticable for any but footmen, although a few donkeys and bullocks accompanied the force. These, however, obstructed the road and had eventually to be unloaded, and the loads carried by men. At 4 miles a <i>kotal</i> is reached at the foot of the steep descent, which

ROUTE No. IX—*concl'd.*

No. of Stage	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	

short it was a most difficult one and took nearly 15 hours. The men all carried their own kits and three days' provisions. The Namar villages belong to the Khiddarzaïs and are their head-quarters. They had previously considered these villages inaccessible to our troops. No supplies are obtainable here with the exception of fire-wood, which is abundant, the hills being clothed with oak, olive and other trees. *Makai* might perhaps be obtained, water is good, but rather scanty, sufficient for a small force of not more than 1,000 men. Height of camp 4,750'.

6	NISHPA (ATAL KHAN KAHOL).	5	50½	The track runs down the valley in a north-north-east direction the whole way to the Khiddarzaï Dhana, on the left bank of which Nishpa is situated. For ½ mile the road runs across the level ground which forms the bottom of the basin in which Namar Kalan is situated. This basin has no outlet. At ¾ mile a low <i>kotal</i> is crossed, and the track then runs down the centre of the valley. There are several Khiddarzaï villages passed on the way, chiefly on the left. The track runs through wild olive bushes nearly the whole way. Just before reaching the <i>dhana</i> about ¼ mile to the left the village of Namar Khurd (Khiddarzaï) is passed, and at 4½ miles the Khiddarzaï Dhana is reached at the village of Khushbina (headman, Malik Aman, who had been fighting against us). Height of village 3,530' (aneroid). This, and roughly speaking all the villages on the right bank of the <i>dhana</i> are Khiddarzaï. Those on the left belong to other sections of the Uba Khel. Khushbina contains about 50 houses and is situated in a very strong position above the <i>dhana</i> commanding the eastern approach. From Khushbina there is a descent of about ½ mile into the bed of the <i>nala</i> . Height 3,250'. Here there is a good stream of clear running water. The ascent to the village of Nishpa on the left bank belonging to the Atal Khan Kahol section, is steep; and the village is reached at 5 miles. The headmen are Surat and Shadigul, both of whom came into our camp. This is a large village with a good deal of cultivation. There is a spring above the village and water can also be obtained from the stream below. No supplies, except a small quantity of <i>makai</i> , are obtainable here. This road is practicable, but difficult, for laden mules. Height of Nishpa 3,600' (aneroid).
---	---------------------------	---	-----	---

7	KARAM	5	55½	The road on leaving camp descends into the Khiddarzaï Dhana and runs for about ½ mile in a south-south-west direction. It then turns south-west at the small hamlet of Khushbina for another half mile, passing through a <i>tangi</i> with high precipitous cliffs on each side. The road follows the <i>nala</i> the whole way over large boulders and stones in the bed, and at about 1 mile the general direction is changed to east. This continues the general direction until Karam is reached. The whole march is a very difficult one for mules, being mostly over huge boulders in the bed of the <i>nala</i> ; and at present quite impracticable for camels. The <i>tangi</i> is where the Khiddarzaïs attempted to oppose Colonel Ross's force and is an exceedingly strong position. At Karam there is a good supply of running water in the river bed, and a small amount of cultivation on both sides of the stream. Camel-grazing, grass and firewood are obtainable, but no other supplies, except perhaps sheep and goats. Height of Karam 2,650'.
---	-------	---	-----	---

8	DRAZAND	18	73½	Leaving camp track descends bed of Khiddarzaï Dhana, here called Shingao, east-north-east, which is the general direction of the march till the <i>nala</i> bed is left. At ½ mile track to Parwara and Mogal Kot turns off to right, and at 3 miles track to Raghasar goes off to the left. From this point there is another path meeting our road further on at Landai, supposed to be shorter and better, which it was not. The track continues along the bed of the <i>nala</i> over boulders and stones. The bed is confined between high perpendicular banks, average breadth being about 200 yards. At 6 miles the Uba Khel village of China is passed on the right. On the opposite side of the <i>nala</i> to China is the Uba Khel village of Landai. At 7 miles a <i>nala</i> comes in on the left up which is a road to Drazand said to be a little shorter, but not so good as the one we followed. At 7½ miles the Uba Khel village of Shekh Mela is passed on the left. At 9½ miles the track leaves the Khiddarzaï Dhana and turns up a branch <i>nala</i> to the left called Lana Khwaze in a direction north by west, which is the general direction of the march as far as Drazand. Following this branch a low <i>kotal</i> (1,600') is crossed at 11 miles. This is the watershed between the Draband or Drazand and Chandwan Zams. At 15½ miles water is reached in the Manda Khwar, which the track crosses and then ascends on the other side to a large level plateau. This it crosses for 2½ miles when the camping ground is reached on the right bank of the Drazand Zam. Drazand itself (which is the largest Uba Khel village, containing several towers and 100 houses) is 1½ miles from camp higher up the stream. The headman of the Uba Khel, Fattah Khan, lives here. The Landi villages are opposite on the left bank of the <i>nala</i> . At Drazand there is a limited amount of supplies, and hardly sufficient for the consumption of the inhabitants themselves. There is a local <i>baniak</i> at Drazand, and camel-grazing and firewood are all obtainable and also grass, but it is necessary to go a little distance from camp for these. Water is good and abundant from the Drazand Zam. Height of camp 1,450'.
---	---------	----	-----	---

9	DRAHAND	11	84½	Leaving camp in a north-easterly direction the track descends into the bed of the Drazand Zam itself at ½ mile, and runs along the open valley east by north for 3½ miles. This valley is cultivated in places, and there is a good supply of water obtainable in the stream. At 3½ miles a <i>tangi</i> is reached. This is the outlet of the Drazand Zam and is 30 or 40 yards wide. The water in the <i>tangi</i> is not more than 1½ to 2 feet deep. The enemy held a <i>sangar</i> on the right of the <i>tangi</i> when the cavalry reconnaissance was sent out on the 30th October from Draband. After passing the <i>tangi</i> the hills open out and the plains are reached. The road for the next 3 or 4 miles is stony, and from there to Draband dusty, but free from stones. At 11 miles Draband is reached. The general direction of this march is east throughout. Draband is a small town in the Punjab and a military frontier post, where supplies of all kinds can be obtained. Height of camp 650' (aneroid).
---	---------	----	-----	---

10	KULACHI	15	99½	} See "Routes on the North-West Frontier."
11	HAIN DAN	12	111½	
12	DZERA ISMAIL KHAN	15	126½	

Route No. X.

FROM NAMAR KALAN TO MOGAL KOT *via* WALWASTA, AND BACK *via* WARGHARI.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
1	MOGAL KOT ...	14	14	Leaving camp ascend for 2 miles in a south-westerly direction for 700 feet to the <i>kotal</i> (5,650') on the road to Wala over Maramazh. From this <i>kotal</i> the track leaving the Wala route winds down through olive trees in a southerly direction, which gradually turns south-south-east, and the latter remains the general direction of the march all the way to Dhana War. At 3½ miles the bed of the Walwasta <i>nala</i> is reached. Height 4,700'. There is a little running water in the <i>nala</i> at this point. The track runs along above the left bank of the stream and at 4½ miles reaches the <i>nala</i> bed again. Here a track goes off to the right to Dhana Sar. The road continues to follow the valley first on one side, then on the other, and sometimes in the <i>nala</i> bed itself. Olive trees are abundant and grass is plentiful. At 6½ miles the large Chuhar Khel village of Karozai with a tower is passed. This village is chiefly on the left bank of the <i>nala</i> , but there are some houses on the right. At 8 miles there had been a landslip, almost blocking the road. Here the track was very bad for mules. At 9 miles Dhana War, where the Chuhar Khel Dhana is met, is reached. Here there is a large stream of water running through the pass, which is confined between high precipitous sides. No supplies obtainable except grass. Height of camping-ground 3,125'. From Dhana War to Mogal Kot see Route VIII.
2	NAMAR KALAN ...	10	24	Leaving camp at Mogal Kot, which was pitched on the left bank of the Chuhar Khel Dhana, the track proceeds west turning north-west at 1 mile. This latter continues to be the general direction of the road for the rest of the march. At 2 miles the village of Nishpa is passed on the left. This is a Chuhar Khel village. At 2½ miles a path goes to the right to Farwara. At 3 miles the track descends to the bed of the <i>nala</i> which drains this valley, and joins the Chuhar Khel Dhana at the village of Baskai. At this point water is running in the <i>nala</i> . Height 2,750'. The track follows the <i>nala</i> gradually ascending. Grass is abundant in the bed of the stream with <i>ber</i> , acacia, &c. At 5 miles the village of Warghari is passed on the left. This is a Chuhar Khel village with a tower. There is a certain amount of cultivation here and some trees. Up to this point the road is fairly easy. The track now leaves the <i>nala</i> bed and commences to ascend the <i>kotal</i> above Namar Kalan. At 6 miles the track passes through the small Chuhar Khel village of China (3,450'). This village is prettily situated in a small valley, and is surrounded with cultivation, trees, and vines. There is a good stream of water above the village, which is used for irrigation purposes. The ascent after China becomes more stiff, and the path winds up to the crest of the range which is reached at 9 miles. Height 5,300'. The descent, about one mile, to Namar Kalan is severe; but laden mules can come down, and the whole march, though difficult, is practicable for mules.

Route No. XI.

FROM NISHPA (IN THE KHIDDARZAI DHANA) TO THE TAKHT-I-SULIMAN AND BACK TO KARAM.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
1	ZINDAWAR ...	6	6	Leaving Nishpa ascend the <i>nala</i> to the north in a north-north-east direction. This is a steady ascent for 2½ miles to the <i>kotal</i> . At 1 mile the track passes through the Uba Khel village of Shabai. Here there is water, but no more was met on the road till Zindawar was reached. Height of <i>kotal</i> 5,600'. From the <i>kotal</i> the track runs over a plateau first in a westerly direction gradually turning more towards the north. At 3 miles the village of Karahai (Uba Khel) is passed. Here there is only water after rain. At 4 miles the descent from the plateau is commenced, this is very steep for a few yards, and all the loads had to be carried. Afterwards, although steep, the road was practicable for lightly laden mules. The track zigzags down for about 1,300' into the bed of a <i>nala</i> draining into the Drazand Zam. On reaching the <i>nala</i> the track follows its left bank for a short distance and then reaches a deep rift close to Zindawar. The track zigzags down this, and at 6 miles Zindawar is reached. Here there is a little cultivation. Water is obtainable in the rift mentioned above, about ¼ mile from camp. This is a pool of excellent water, but difficult to get at. There is also water in the <i>nala</i> about 1 mile from camp where animals would have to be watered, as they cannot reach the pool. The hills on both sides of the <i>kotal</i> are thickly clothed with grass and small trees, chiefly wild olive. Zindawar is a village belonging to the Sultanzai section of the Uba Khels. Firewood and grass are abundant, no other supplies. General direction of march north. Height of camp 3,930' (aneroid).
2	SIGHRAI ...	5	11	Leaving camp pass through the village of Zindawar and ascend the hillside in a north-westerly direction. The path runs round the shoulder of the hill and at 2 miles the height is 5,000' (aneroid). The direction is now north-north-west. The side of the hill is covered with grass and there are olives and other trees, but these are gradually becoming more scarce. At 3 miles, height 5,350' (aneroid), the track meets the pilgrim route coming in from the right. About ¼ mile down this road in a north-easterly direction there is a small spring of good water at a place called Tora Tizha. At 3½ miles a deep rift is passed on the left. In this there are some pools of rain water. This water is not good and very difficult to get at. The height at this point is 5,700'. Up to this place the mules were taken, but it was most difficult going. From here the path zigzags up the face of a cliff. At 7,000 feet altitude pines begin to make their appearance. At 5 miles the foot of the Takht itself is reached, where there is a small spring called Sighrai, the last water met with on the way up the Takht. Here the force halted for the night. Height of camp 7,400' (aneroid).

ROUTE No. XI—concl'd.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
3	TORA TIZHA ...	5	16	The ascent to the Manzalara Kotal occupied 2½ hours and the height of the <i>kotal</i> was 9,750' (aneroid). From here a fine view is obtained over Maidan, with the Kaisarghar range on the other side of the plateau. Maidan is covered with pine forest, but there is a total absence of water, except after rain or snow. The road up the Takht which was followed was practicable for footmen only. The cattle and sheep of the country are unable to use it owing to its difficulty. Returned to camp at Tora Tizha. Except wood and grass, no supplies obtainable. Height of camp 5,350' (aneroid).
4	KARAM <i>via</i> RAGHASAR	16	32	Leaving camp in a north-easterly direction immediately cross the stony bed of the Wargarai <i>nala</i> and pass the small spring of Tora Tizha which is in its bed. The track then descends by the pilgrim route along the course of the <i>nala</i> above its left bank. This is a steep and stony descent, and in one place the loads had to be taken off the mules. At 1½ miles the <i>nala</i> bed itself is entered, and the track continues down it in an east-north-east direction. At 2 miles the Zindawar <i>nala</i> (in which we previously camped higher up) comes in on the right. The height here is 3,750'. The <i>nala</i> then runs in a direction east-north-east, and the track follows the bed over large boulders, which further on becomes more shingly. At 4½ miles good, clear, running water makes its appearance in the bed for the first time. Height 3,050'. The direction is now east. <i>Ber</i> and olive trees are on both sides of the valley; here and there is grass. At this point a small branch <i>nala</i> named Jat Aghbakh comes in on the right, and at the junction is a small Sultanzai village with a little cultivation. From this point the track continues down the bed of the <i>nala</i> which is here known as the Sultanzai Khwar. The bed then contracts and is confined between high, banks. The going is bad owing to the boulders which obstruct the passage. The water has also disappeared but at 5½ miles re-appears, and there is a strong stream sufficient to turn 2 mills which were passed, one on the right, the other on the left bank. The height of the bed of the <i>nala</i> is here 2,700', the direction is east. At 8 miles (height 2,500') the Sultanzai Khwar is left and the track to Karam turns off to the right and an ascent of 150' is made to a stony plateau. The track crosses this in a south-easterly direction. At 10 miles the direction is changed to south-south-east, and at 11½ miles the foot of a ridge is reached, up which the track ascends south by east for 200 feet to a low <i>kotal</i> which is reached at 12 miles. From here the descent to the Khiddarzai Dhana is made in a south by west direction and the bed is reached at 13 miles. The track then runs up the stony bed of the <i>nala</i> south-south-west, changing at 15 miles to west-south-west, and at 16 miles the camp at Karam is reached. Here there is a good supply of water running in the <i>nala</i> bed, and there is a certain amount of cultivation on both sides of the stream. Camel-grazing, grass, and firewood are obtainable, but no other supplies, except perhaps sheep and goats. Height of Karam 2,650'.

Route No. XII.
FROM DHANA SAR TO VIHOWA.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
1	LEWAGHWAZH ...	19	19	The road goes up the <i>nala</i> along a rough shingly bed between high mountain masses till it reaches the Loara plain; at 9½ miles it bends round to the left in a south-west direction over the Loara plain, keeping close to the foot of the range to the east. The road to Aporai by the Khwaranai or Khabaranai Kotal here leaves the road and goes in a north-westerly direction, along a fairly well marked track. The Lewaghwhazh road is, however, undefined for about a mile, but one cannot go wrong if one keeps close to the foot of the range on the left. The path follows a shingly watercourse for some distance passing a few Maranai or Mirani huts in gaps in the hills, which are now (November) deserted. At 13 miles road crosses open plain with a considerable amount of <i>khushkawa</i> (dependent on rain) cultivation. A good deal of the stubble of <i>zhidun</i> , a sort of millet, was in the ground, and a considerable amount of grass of two varieties, called in Pushto, <i>srabuzhia</i> and <i>pahal</i> , both good forage, particularly the latter. At 16 miles the top of a sort of <i>kotal</i> is reached, the watershed dividing the drainage of the Chuhar Khel Dhana and the Vihowa. The height by aneroid here 4,550'. This <i>kotal</i> is almost imperceptible (somewhat like the Chari Mehtarzai on the road from Quetta to Hindu Bagh), and is only apparent from the lines of drainage. Road now descends into somewhat broken ground still keeping along foot of low hills on the left, and at 18 miles the Margzani village of Lewaghwhazh is reached, a collection of 50 or 60 poor looking huts, with unmortared stone walls and brushwood or grass roofs, inhabited by both Margzanis and Isots, on the left bank of the Nigandi stream. The camping-ground is reached a mile further, on the right bank of the same stream. There is a moderate amount of water in the bed, but it is decidedly saline, somewhat like Epsom salts. Fuel and camel-grazing good, chiefly from <i>babul</i> and tamarisk. Camping-ground for two regiments on a sort of terrace on right bank, but unlimited ground can be found on the plain or plateau above. Coarse grass from river bed and from hills plentiful. Sheep and goats procurable from village. The whole march though long was easy for camels, but there was no water. Height of camp 4,257'.
2	VIHOWA TOT SAR ...	9½	28½	Road follows the Nigandi stream for 1½ miles, then ascending the left bank goes along a stony plateau south-east over a small <i>kotal</i> called Pazhai. From the foot of this <i>kotal</i> road enters a long plain called Wah, and in a corner of it on the left is a deserted Margzani village called Taganai. Road goes over this plain for 2½ miles, mostly through <i>khushkawa</i> cultivation; and at 6 miles crosses another

ROUTE No. XII—contd.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	

small *kotal*, entering a valley similar to the one previously traversed. At the foot of the range to the east are 2 or 3 small villages of Musa Khel, called Khawandai. At $8\frac{1}{2}$ miles the Toi watercourse is entered. The bed is very wide and broken. Best camping-ground is on the right bank $\frac{1}{2}$ to $\frac{3}{4}$ mile west of the Toi pass. Fuel fairly plentiful, camel-grazing good; *karbi* sufficient for a small force. Water good and abundant. The march is easy throughout. Height of camp 3,600'.

3	*TANGI SAR OR PALOSIN ...	12	40 $\frac{1}{2}$	From Toi Sar road enters Toi pass, $\frac{3}{4}$ to 1 mile wide a entrance, and for $2\frac{1}{4}$ miles goes along cultivation; path very badly defined; road should be made above cultivation to avoid stone walls and rice fields. The valley is enclosed by the Orah ridge on the right, and low spurs from the Tsapar
<p>on the left. A village called Mohmanzai, 15 or 16 huts under a crag 300 yards to left at this point. All available ground on both banks is cultivated in neat little terraces: crops now (November) about to be sown, wheat and barley. At $3\frac{3}{4}$ miles valley contracts to about 50 yards, a few Husenzai or Senzai huts on right bank. The Senzai and the Malkazai are sub-sections of the Musa Khels. Marna and Gulan are <i>maliks</i> of the Senzai; Bismillah and Batak of the Malkazai. The Senzai families live in the pass as far as Tangi Sar, the Malkazai from Toi Sar in the plain as far as Babu in the same plain. Half a mile further ($4\frac{1}{2}$ miles) there are six huts belonging to Batak with cultivation, the valley here opens out a little for another half mile and the road then enters the first <i>tangi</i>; on the right hand are about ten huts and a graveyard, the graves being decorated with <i>markhors</i>' horns stuck on the end of long poles, and a <i>nala</i> or ravine comes in on the right-hand side from the Salai hill. The first <i>tangi</i> is from 50 to 80 yards wide, the hills on both sides easy and camels can go along the bed of the stream; path now made by sappers along left bank. From this point the path goes along the bed and the banks of this stream, which here winds considerably and has a very rocky bed enclosed by precipitous rocky cliffs, till it enters a long narrow valley with cultivation on the left bank called Manzakai, belonging to Gulan. At 7 miles reach end of Manzakai cultivation; the stream, here about 40 yards wide, now makes a sharp bend and the path crosses it; a little further a <i>nala</i> comes in on the right from Salai, with small stream in its bed; the road then leaves the river bed and goes over a stony flat on right bank in a south-east direction to avoid a bad <i>tangi</i>. Here is another graveyard, and below on the left a good deal of terraced cultivation. About half a mile from this point road begins to ascend the Surgharidzi Kotal, a fairly easy ascent of 300 feet in $\frac{1}{2}$ mile; top of <i>kotal</i> 3,700' approximately. Below, to the north from this point, a good view can be had of a wide watercourse, called Plane (Balana on map) which joins the Toi stream from the north. There are a few huts and cultivation on the right bank of this stream, but there is no perennial water in its bed. High ranges enclose this watercourse on both sides; that on the right (east) being the higher and called Shinghar. It is a southerly prolongation of the Takht-i-Sulman, and probably rises to nearly 9,000 feet. The Toi stream forces its way through a <i>tangi</i> at the southern end of this hill, which is impracticable for man or beast. About a mile of rather steep descent brings one into the bed of the Toi stream again (aneroid 3,225') which now has a fairly straight course in a northerly direction as far as Tangi Sar. Cross stream to left bank and then along cultivation for quarter mile (total $9\frac{3}{4}$ miles) when the river has again to be crossed and the road goes along a bit of cultivated land 150 yards square called Palosin. This name, however, appears to be given to all this part of the valley as far as Tangi Sar, doubtless from the <i>palosi</i> (wild acacia) trees which abound here. Road then goes along river bed, here 200 yards wide, and at $10\frac{1}{2}$ miles passes a gap in range on right which leads to one of Bahadur's villages. A little beyond this on opposite bank is a small village, belonging also to Bahadur, one of the Senzai <i>maliks</i>. At $16\frac{3}{4}$ miles the road crosses to left bank and goes along a flat <i>kach</i> for about 400 yards and again crosses to right bank where is a long strip of good "fine weather" camping-ground about $\frac{3}{4}$ mile in length. This was used as a camping-ground by the column. The northern end of it is covered with quite a thick growth of <i>palosi</i> trees. At 12 miles cross to left bank and go along a sandy strip for half a mile to the entrance of the <i>tangi</i>. This spot is called Tangi Sar, and the sandy strip is the usual halting-place for small parties or <i>kafilas</i>, but was unsuitable for a military camp owing to its being too narrow, and right under the hill. Grass procurable in any quantity from the hills, also a fair amount of <i>karbi</i>; camel-grazing abundant from the <i>palosi</i> trees. Water from the stream good and abundant. Height of camp 3,030'.</p>				

4	SEMA ...	5 $\frac{3}{4}$	46	From Tangi Sar the road goes to the Sema <i>nala</i> described in the Guzai route (see Route XIII), distance $3\frac{3}{4}$ miles; thence the path goes down the <i>nala</i> in a south-west direction; at $4\frac{1}{4}$ miles it turns sharp round south and then south-east; bed very rocky and rough. At $5\frac{3}{4}$ miles reach junction of this stream with the Vihowa or Toi. Here above the right bank of the Sema <i>nala</i> is a plateau only sufficient for a small camp. Fuel abundant and water good. Height 2,700'.
---	----------	-----------------	----	---

5	KAIWAHAN ...	7 $\frac{3}{4}$	53 $\frac{1}{2}$	The road goes down the main stream for $\frac{1}{2}$ mile to the Gat <i>tangi</i> . There is one difficult place in it, but otherwise road is fair though over boulders. The <i>tangi</i> is about $\frac{1}{2}$ mile long, and when first seen was impassable for animals. A road was made through it in two days. Probably in
---	--------------	-----------------	------------------	---

*NOTE.—There are two routes from Toi Sar, that described above and that given in Route No. 123 "Routes on the North-West Frontier" *via* the Narai Kotal. The latter is the route by which the little trade between Vihowa and the Zhob is carried on. The route followed by the column and described above is more direct, and as far as Tangi Sar there are no difficulties, and the road lies through a fairly well-populated and fertile district. At Tangi Sar, however, the river begins to enter a series of very difficult defiles or *tangis*; the first two are quite impracticable and could not be made fit for baggage animals without a good deal of skilled labour and much blasting. These *tangis* were avoided by using a track which leads north from Tangi Sar and which after crossing a *kotal* of a somewhat severe gradient descends into the Sema *nala* and thence joins the Vihowa stream again a few hundred yards in front of another *tangi* which was made practicable for the camels of the column in 2 days. After this there were no further difficulties on that route.

From Tangi Sar an alternative route to Vihowa *via* the Guzai *nala* was explored, but was found to be no shorter than the main route and was considerably more difficult, for the road passed over a *kotal*, the ascent to which was 1,800' in $2\frac{1}{2}$ miles and very rough. This route is sometimes used by Nasars, but never by the Hindu traders.

It was unfortunate that the Narai route could not be explored. The ascent and descent of the Narai Kotal are said to be very difficult, and the top of the *kotal* seems to be between 5,000' and 6,000' above sea level and might be closed for a few days in winter by snow. Water too appears to be scanty on this route. The route *via* Tangi Sar has then these advantages:—

1. It is the shortest.
2. Water-supply unlimited though rather saline from the plains to Tangi Sar.
3. It passes through a fairly fertile and well-populated country.

ROUTE No. XII—concl'd.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	

future one working day would fit it for camel traffic. On emerging from the *tangi* the road goes partly down the bed of the stream, partly along the edges on each side for $1\frac{1}{2}$ miles. The people are Isots, very quiet and inoffensive. Cultivation principally barley and *makai*. Firewood plentiful. Water bad, owing to sulphur. No supplies. Camping-ground large, but bad in wet weather. Part of the column camped to the east of the *Gat tangi* about $\frac{3}{4}$ mile from where track left main stream. A road had to be made up the slope. Here there is always water, but it is generally salt. From this point (3 miles) a short ascent (improved to a fair camel road in half an hour) led to a stony *raghza* or plateau. At $5\frac{1}{2}$ miles it descended gradually into a *nala* and crossed the main caravan road from Dera Ismail Khan to the Narai Kotal. At $6\frac{1}{2}$ miles another ascent was made to a *raghza* overlooking the Kaiwahan *nala* and following this for $\frac{1}{4}$ mile, the village was passed and the camp was reached at $7\frac{1}{2}$ miles. Camping-ground unlimited. Water good. Firewood plentiful. Grass to a small extent over all the hills, 40 or 50 houses of Isots and a considerable amount of cultivation. Inhabitants very friendly and had laid in supplies for the Vihowa column. Considerable flocks of cattle, goats and sheep were seen about, but none were offered for sale. Height of camp 2,810'.

6	CHITARWATA	...	13 $\frac{1}{2}$		The road ascends a <i>nala</i> and then a fairly easy path to the Lawargi Kotal 700 feet above the camp, at $2\frac{1}{2}$ miles. For another half mile it continues fairly level but stony when it descends, and after rough going down the side of a hill reaches the Padri <i>nala</i> at 4 miles. Down the stony bed of this
				67	

it continues, until at $8\frac{1}{2}$ miles it goes over a sloping sheet of rock up which camels can go without difficulty. It continues on crossing and recrossing the river to 10 miles, and at Badri or Barkohi War there is a large open plain on which the column encamped and which is the regular halting-place for *kafilas*; camping-ground very extensive. Firewood and camel-grazing in abundance. No inhabitants or supplies. Chitarwata is reached at $13\frac{1}{2}$ miles.

7	GARIBAR	...	8 $\frac{1}{2}$		Road along the Khuzawalang Kach for a few hundred yards, then into bed of stream and crossing to opposite bank reach Srawal Kach at 2 miles. A wide but dry <i>nala</i> comes in here on the right; at 4 miles pass another <i>kach</i> on the left hand called Zangal (Kasrani); at 7 miles is a
				75 $\frac{1}{2}$	

cultivated spot called Ghulu Shpelai on the right bank, also Kasrani; and about $\frac{1}{2}$ mile further is Sigha War or the mouth of the Sigha ravine, which here joins in on the left. This is a halting-place much frequented by *kafilas*. A little beyond this is another fairly level bit of ground on the left bank called Garibar where the column encamped; camel-grazing fairly plentiful. The ground is somewhat broken, but 2 regiments could encamp here. The river has to be forded several times during this march. Its depth at the fords averages $2\frac{1}{2}$ to 3 feet, but it is probably less than this during the dry season. The path is hardly visible; and the bed of the stream rough for shod animals.

8	VIHOWA	...	15		At about 1 mile from camp pass the <i>kafila</i> halting-place Zohar War on the left, then going along bed of stream pass Jarwanga Kach at $3\frac{1}{2}$ miles, and reach Seori Kach at $4\frac{1}{2}$ miles. There is a little cultivation here and also camel-grazing. Thence for 2 miles along river bed, and at $6\frac{1}{2}$ miles ascend
				90 $\frac{1}{2}$	

right bank by a fairly easy slope. The road then goes in a south-east direction along a well trodden path working round east towards Vihowa which is reached at 15 miles. The last 5 miles of this road would be heavy going in wet weather as the soil is clay.

Route No. XIII.

ALTERNATIVE ROUTE FROM TANGI SAR TO VIHOWA *via* THE GUZAI NALA.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	

1	SHNE KAZHE	...	17		From camp at Tangi Sar road goes along right bank of stream in a northerly direction for $\frac{1}{2}$ mile, then crossing the stream goes along a sandy strip for 400 yards. The stream here bends round to the east, and passes through a narrow <i>tangi</i> quite impassable for any baggage animal.
				17	

The road now begins to ascend the lower slope of the Shinghar range along the right bank of a small torrent bed which it crosses about $1\frac{1}{2}$ miles from camp. Thence a stiff ascent by a zigzag and along the side of a broad ravine (aneroid 3,450'); thence ascending in a north-east direction by a steep path 10° to 12° slope, reach a small *kotal* (3,680'). Thence north to another small *kotal* a few hundred yards further on. From this a steep descent of 330' to Sema *nala*. The gradient is pretty severe, 15° or 16° in a few places. This point is a little less than 4 miles from Tangi Sar camp. Just above the *nala* to the east is a level piece of ground where a regiment might squeeze in with difficulty. Water from Sema *nala* below it and to the east. The road descends into this, a steep drop of 100 feet, and goes in a general northerly direction up the *nala* for $2\frac{1}{2}$ miles to Sema Sar; nasty boulders in the bed most of the way which would have to be cleared for a baggage column. There is no suitable ground for a large encampment at Sema Sar. It is merely a halting-place for the few *kafilas* of bullocks and donkeys and sometimes hill camels which may come by this route. There is perennial water in pools in the bed of the stream of good quality. Troops would have to encamp in a very irregular fashion along the rough bed of the *nala*. Height by aneroid 3,500'. The road now leaves the *nala* and winds up the side of the Ziba hill to a *kotal* thickly wooded with wild olives, ascending 1,600' in $2\frac{1}{2}$ miles; the last mile is particularly trying as the gradient is about 1 in 4 and very rough. Approximate height of *kotal* 5,100'. From this *kotal* a good view can be had of the plains, Vihowa and even the Indus being clearly visible on a fine day. A path practicable for mules goes down in a south-south-east direction to the Vihowa near the

ROUTE No. XIII—concl'd.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	

mouth of the *tangi*, through which the column made a road. The path to Guzai descends in a north-east direction by a well-defined and fairly easy path, and at $11\frac{1}{4}$ miles reaches a sort of neck, fairly level, along which a path leads off north-east to Guzai which is the one we ought to have followed, but the guide mistook the road and led us down the spur (north) to a small *nala* where a track leads off to Kot Ashakhan. We followed the right bank of this *nala* for a few hundred yards to the head of a long narrow valley. It then ascends the side of a hill to the right (east) and strikes the path from which we strayed. In the valley above mentioned is a good deal of terraced cultivation, and a few temporary dwellings of Isots and Musa Khels. Between 13 and 14 miles road ascends by a steep zigzag path to a *kotal*, Kandghar (4,220'), and thence by a rough and steep descent reaches a small plateau covered with scrub and gravel. Thence still descending almost east by a rough path reach a *kafila* halting-place at 15 miles called Lukhey; ground large enough for two regiments, but dirty water from a *nala* to the south, 60 feet below camping-ground. Most of the camel-grazing has been used up. The path thence to Shne Kazhe enters a *nala* to the east of the camping-ground and follows it north-east for 2 miles to its junction with a watercourse. The halting-place is on a strip of ground on right bank of stream. Water good and abundant. Fair camel-grazing and grass. No village or supplies. Camping-ground for two regiments.

2	VIHOWA	...	39 $\frac{1}{2}$		
				56 $\frac{1}{2}$	

Follow bed of stream for $\frac{3}{4}$ mile, then ascend right bank, to avoid defile in river bed, and keep along this for about 1 mile, then enter and follow bed of stream. At $6\frac{1}{4}$ miles a *kach* on left bank called Suragbala. A path goes off from here to Kot Ashakhan about 3 or 4 miles distant. At 9 miles river forces its way through a ridge of white limestone. In order to avoid a *tangi* in the stream we went over the left bank, then round in a north-east by east direction along a small *nala* into what seemed a "cul-de-sac" for the path was stopped by a drop of 15 to 20 feet. This was avoided by ascending a steep hill on the left about $1\frac{1}{4}$ miles from camp. The track then descends into the Kaora *nala* (also called Zghartakai) in which is a small sulphur stream. The road follows this to its junction with the main stream (called Pasteh) at $11\frac{1}{2}$ miles. There is a difficult drop for horses into the bed of the main stream. The main watercourse is about 80 yards wide with low hills on either side. The mules belonging to the party followed the bed of the stream from the 9th mile and experienced no difficulty. Somewhere between this point and the 9th mile, where we wrongly left the bed of the main stream, a track goes over the right bank to Guzai Ghar and thence to the Vihowa stream which is the usual road taken by *kafilas*. The water of the combined stream has here a decidedly sulphurous taint, and it does not seem to improve much even when it enters the plains. Continuing along the *nala* at $15\frac{1}{2}$ miles the Lari *nala* joins in on the left, up which goes a cattle path to Parwara; half a mile further the road leaves the river and goes through a small ridge on the left and then descends into a parallel valley on the left called Surwal or Surjan. Here is some wheat cultivation, camel-grazing and a very fair camping-ground for two regiments. At $16\frac{1}{2}$ miles this valley joins the main one; the hills are mostly red sandstone; at $18\frac{1}{2}$ miles river makes a wide bend and goes through a rather narrow gap, and then the Lagzan *nala* joins in on the right. The hills are perfectly bare, and in the cliffs by which the stream is enclosed are several caves, mostly formed by the action of the water, and here and there enlarged by some of the inhabitants to form temporary abodes. At $21\frac{1}{4}$ miles reach an isolated sandstone rock called Takai about 50' high on right bank; the road keeps to right of it and ascends a small but rather stiff *kotal* cutting off bend in stream. Camels would have to keep to the bed of the *nala*. Thence descending again into stream, $\frac{3}{4}$ mile further on, a *nala* with small flow of good water joins in from the left, called Khuzha Walang. At $22\frac{1}{2}$ miles the pass opens out into a long stony valley on the north side of which lies the village of Khui. There is abundance of camel-grazing here and unlimited camping-ground. Patches of cultivation and a few date trees can be seen from the road, but probably a considerable amount more cultivation exists, as the soil though stony in places is mostly alluvial and is covered with tamarisk and *jal* trees. Height by aneroid 1,175'. At $25\frac{1}{2}$ miles road ascends left bank and continues along it, some 30' or 40' above river bed for $\frac{3}{4}$ mile, when it again enters the *nala* by a rough and steep descent; thence crossing the stream ascends the right bank, and at $27\frac{1}{2}$ miles reaches stony *daman* of the hills. From here to Vihowa is about 12 miles across the plain which is stony for 2 or 3 miles and then soft clay, which after rain is almost impassable.

This stage is practicable for camels, but it would have to be divided into 3, viz.:—

Surwal	...	...	16 miles.
Khui	...	...	6 $\frac{1}{2}$ "
Vihowa	...	...	17 "

Camel-grazing is abundant the whole way, but little grass was seen at the lower end of the pass. The chief difficulty of the road is its roughness. This is more trying for shod animals than camels; but the latter would be useless beyond Shne Kazhe as the gradients are too steep.

Route XIV.

FROM DERA ISMAIL KHAN TO APOZAI, *via* DRAZAND AND THE ZAO PASS.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
1	KHULI	...	13	
2	SAGU	...	6	
3	DRAZAND	...	16	
			35	

See "Routes on the North-West Frontier."

ROUTE No. XIV—*contd.*

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
4	DRAZAND ...	11		See Route IX.
5	MURGHA ...	7	46	Leaving camp the road runs south-south-west to the village of Drazand, which is passed at $1\frac{1}{2}$ miles. At about 2 miles the road descends into the river bed and runs west round one of the low ranges of hills intervening between the Drazand plain and the Takht range. At about 3 miles
			53	

villages commence on both sides of the valley which is well cultivated. At 7 miles (road still up river bed) reach the village of Murgha on high ground looking down on terraced ground on which camp was pitched. Forage and water abundant. Wood scarce. Road from Drazand stony but passable for all arms, wheeled artillery included, with a little improvement at descent into river.

6	SUR KACH ...	8		After leaving camp the road proceeds in a northerly direction along the bed of the Drazand Zam for $1\frac{1}{2}$ miles, when the river bed itself turns west and leads to the Gat defile. The path then leads up a <i>nala</i> north through a bed of red sand which it only follows for a few hundred yards before ascending a steep clay <i>kotal</i> , elevation 1,720 feet, leading to the village of Malik Palak Khan, called Wazir Kot. The path then runs in a north-westerly direction over a stony plateau for $1\frac{1}{2}$ miles crossing four small stony <i>nalas</i> at right angles. Bad going for the camels which should make a circuit beneath the hills to the west and join the path again further on. The road then descends down a good but steep path into the broad bed (now dry) of the Surkhozai <i>nala</i> . From here the road runs for 4 miles in a northerly direction over sandy soil only leaving the river bed once to make a short cut for $\frac{1}{2}$ mile on the east bank. Several small <i>nalas</i> come in from the west, but none from the east. At about 8 miles the Khalilzai stream flows in from the west through a ravine, and the camp was pitched here. The name of this spot where the Surkhozai and Khalilzai <i>nalas</i> meet is Sur Kach. Grass, wood, and water abundant. Room here for a brigade. Height 1,460' (aneroid).
			61	

7	GANDARI KACH ...	7		Leaving camp the path runs north-east for about 1 mile along the river bed (apparently that alluded to in "Routes on the North-West Frontier" as the Sta-wi-war) till the latter flows into the Sawan through a rift in the vertical strata. From this point the road leads through the valley of Chalwaskai. Remainder of route described in Route 122, "Routes on the North-West Frontier," but at 3 miles from Chalwaskai an encamping-ground on the right bank of the Zao should be noticed, which would be available when water was in the river. There is a good camping-ground for a brigade, but tents should not be pitched too close to the hills as falls of earth and stones from them frequently take place.
			68	

8	KAMAL KULIA ...	9		Route described in Route 122, "Routes on the North-West Frontier." The mouth of the Zao defile is abreast of Gandari Kach, but it should not be entered at this opening for the reasons given below, although it is as well to describe this first portion of it. On entering the defile the sides soon become precipitous. At the first hundred yards a waterfall is met about 8 feet high over black shale; this could easily be worked with a pick if required. At $\frac{1}{2}$ mile is met a small shelf about 3 feet high over which the water falls. At $\frac{3}{4}$ mile the bed is blocked by a blackish conglomerate mass of rock which forms a very good landmark, as on the north side the rock is bold and overhanging, some 20 feet high, forming a cavern underneath. On the south side it is slippery, steep, and sloping, but only about 10 feet high, over which the water rushes. This would have been a very difficult place to make anything permanent over, especially as the rock is very hard and not easily worked. Any ramp constructed there must have been washed away by the first heavy flood. An alternative camel track was found leading from camp at Gandari Kach over the left bank of the river, and after several days' work was made passable for camels at all times. This track ascends the left bank beyond the small hill in the Gandari Kach camping-ground, by a zigzag to a height of 60 feet and passing through a gateway cut in the hills runs along the hill for a few hundred yards and descends into the river bed by another artificial zigzag beyond and avoiding the obstacle last alluded to. From this point the river bed must be followed. The direction is south-west by west for about 400 yards, when the first obstacle is reached. This is a large boulder which blocks the whole pass with the exception of a narrow passage on each side. It is 15 feet high on the left side and 10 feet high on the right. Through the passage on the left bank the water flows. On the other side the rock was blasted and a ramp constructed. This ramp is likely to be permanent. Immediately on surmounting this obstacle a long slippery black rock occurs for about 40 yards, some 10 or 15 feet high, the water dashing along the south side. On the north side a path was blasted and picked out 1 foot deep and 2 feet wide, the bottom being roughened and forming an easy and permanent path. The next 200 yards lead across flat black rocks, two vertical rocks about 4 feet high being ramped out of reach of floods. Here the valley opens out, the sides being masses of loose rocks lying about in confusion on the clay hillsides, while the river bed is choked with boulders of great size. Through these for some few hundred yards the path meanders, having been carefully picked out so as to be as much as possible unaffected by ordinary floods; ramps, and one level crossing as solid as possible were built, though very few are required, and those which are are small. All tight places were blasted till a laden camel could pass without difficulty. One hundred yards from the level crossing is a narrow passage 20 to 30 feet wide, the walls of which rise precipitously on either side. On the left bank is a curious overhanging mushroom shaped rock, forming a very noticeable landmark. After passing through this passage one of the most difficult obstacles is met with, a rise of some 12 feet in the river bed, several huge boulders choking the waterway. This was found impassable except on the left bank, where a four foot passage was left between the boulders and the wall down which the water dashed over smaller rocks. The water was diverted to the centre of the river bed, a passage for it being blasted between two rocks and the old channel filled up till higher than any other part of the bed. Up the old waterway a solid ramp was built and the rocks blasted till a laden camel could pass with ease. About 300 yards further on a large white boulder is met, forming a sort of door to a narrow passage, 15 feet broad and 50 yards long, between perpendicular rocks.
			77	

ROUTE No. XIV—concl'd.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	

From here onwards the pass is more open and good going for about 1,000 yards, when a *nala* comes in on the left bank leading to Kashmir Kar. Two hundred yards beyond this in a south-west direction the passage is blocked by the Siri rock. This is a rock some 25 feet high and two smaller rocks rest against it on the south side, through and over which the water falls, having been diverted from the north side where the rock was blasted and a good ramp made. This ramp will always require some repair, as a few paces east of the Siri rock the walls narrow to some 10 feet, so that the water when in flood, after falling over the rock, dashes through the *tangi* and scours away the foot of the ramp, continuing the process until the upper portion falls. This was practically ascertained after the heavy flood on the night of the 29th November 1890, when it was found that the ramp was swept away, though some of the stones, used in building it up, were $3' \times 2' \times 1'$. The Siri rock is of hard white limestone and it would take a long time to destroy it altogether. Even if removed the drop of 20 feet would still remain, whilst as it is the ramp on the north side, if repaired when required to be so, offers all that is wanted for a practicable roadway past it. About 50 yards beyond the Siri rock on the left bank is a curious cave some 50 feet deep and 10 feet broad; dangerous on account of falling stones inside it. From here the *nala* bed opens out considerably for 600 yards and the path only requires a little arranging till the *nala* again narrows, entering a sort of gateway of vertically stratified rock and at $3\frac{1}{2}$ miles from Gandari Kach the rocky sides come down and meet in two saucer-shaped falls about 5 feet high, one being about 50 yards beyond the other. Roads were blasted through the rock in each case and ramps built up to them, out of the reach of anything but extraordinary floods. From here onwards to Kamal Kulia no difficulties occur. It was found impossible to make an absolutely permanent road as owing to the nature of the pass the ramps are liable to be damaged by the water after heavy floods and would require repairs. Except for this the road is now perfectly easy, as all close places were widened by blasting; but any force passing through should send on a party one day ahead to execute repairs. A working party of 150 men in six hours' time should be sufficient for all purposes. During or after heavy rain the pass should be traversed with caution. Masses of conglomerate and of rock and boulders are frequently precipitated from above and occasionally require agility to avoid, whilst the water rises rapidly and would in flood carry all before it. It should be noted that no thoroughly reliable description could even be given of such a defile as the Zao, for it is constantly liable to be blocked by fresh rocks and boulders, either precipitated from above or washed down by the floods, and these would of course form fresh obstacles to be dealt with. As it was, the account given of it in "Routes on the North-West Frontier" presented only a very remote likeness to what was found there.

9	MAZBAI KACH	...	10		This route is sufficiently described in "Routes on the North-West Frontier." It should be noted in addition that at about $\frac{1}{2}$ mile from the camping-ground a path leads on the left bank over the hills to Kashmir Kar. It is distinguished by two great boulders of rock which stand on the right of the path a little way up the hill.
				87	

10	AMANDI DAR	...	11		As in the route book. It should be added that at about $3\frac{1}{2}$ miles the ravine on the right leads direct from the Zhob valley. Through this flows the Sherana stream which here mingles with that of the Khaisor (up which the road to Amandi Dar lies), the two flowing together through the Gat defile and forming with other affluents the Drazand stream.
				98	

11	BARKHARDAR'S FORT.		15		The valley (called the Khaisor) opens out and becomes broader, the low hills which have shut it in gradually disappearing. At $\frac{1}{2}$ mile pass a <i>nala</i> on the left bank. At 2 miles the river bed turns south-west passing through the village of Karam Ghala. There is a short cut for infantry over some cultivation at this point. At $2\frac{1}{2}$ miles the river bifurcates, one arm turning west to Kuria Wasta (some 2 miles distant) and the other south. This latter branch the path follows on the left bank till at 3 miles it debouches on to the plain or broad open valley. At about 9 miles one or two hills are met in the centre of the valley. A village lies at the foot of the largest hill at some distance from the road, name not ascertained. Leaving the <i>nala</i> the path runs along the western foot of these hills till it strikes the gravelly bed of a small <i>nala</i> along which it continues till the hills cease, when the path runs across the plain till at 15 miles it reaches Barkhardar's fort. This is a mud walled enclosure with four towers in the corners. Wood, grass and water plentiful near the village. The water, which is dammed above the fort, can be run down in a small irrigation channel through the camping-ground. The camping-ground at Mani Khwar is about 2 miles south-east of this. Height of camp 5,190' (aneroid).
				113	

12	KARIP KACH	...	16		} See Route IX.
				129	
13	APOZAI	...	$8\frac{1}{2}$		
				$137\frac{1}{2}$	

Route No. XV.
FROM DRAZAND TO RAGHASAR.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
1	RAGHASAR ...	11	11	Leaving camp the road runs south-west along the plateau to the village of Drazand, which is passed on the right at $1\frac{1}{2}$ miles. At 2 miles the road descends into the Drazand Zam. Up to this point the going is good and the descent into the <i>nala</i> is easy. From here the road changes its direction to west, and runs along the bed of the <i>nala</i> till at $3\frac{1}{4}$ miles a <i>tangi</i> is reached. This <i>tangi</i> is about 300 yards broad, on the left of which is the village of Zor Shahr, on the right the <i>ziyarat</i> of Pirghundi. At this point the Sussa <i>nala</i> , also known as the Sultanzai Khwar, from Raghasar meets the stream from the Gat pass, both combining to form the Drazand Zam. From this <i>tangi</i> the road runs up the Sussa <i>nala</i> in a south-west direction for about 1 mile, and then ascends by a gentle slope on the left to a plateau on the right bank of the stream. Up to this point, along the <i>nala</i> bed, the road is rough and stony. From here the track runs almost south. At 8 miles there is an easy descent into the <i>nala</i> bed suitable for camels, but the mule track continues along the plateau to the village of Girdghun, which is passed on the left at 9 miles. From here, on the left bank of the stream, can be seen the villages of Khaisara, Maidan, and Karam Mirzai. Maidan is inhabited by a colony of <i>Saiads</i> , who showed themselves hostile on the 30th October 1890. The road continues along this plateau for $\frac{1}{2}$ mile, and then drops into the Sussa <i>nala</i> again by a gradual descent which is stony but practicable for mules. From here the road runs along the bed of the stream in a south-westerly direction for $1\frac{1}{2}$ miles, till at 11 miles the village of Raghasar is reached. The village is situated on a cliff overlooking the right bank of the Sultanzai Khwar which about a mile from Raghasar makes a right-angled bend in a westerly direction, and thus the village is not visible till one gets close to it, as it is hidden by a projecting spur. Raghasar is a large village and is the capital of the Sultanzai section. The camp was pitched on the left bank of the <i>nala</i> close to a small outlying hamlet. Some maize is grown here and water was obtained from a running stream in the bed of the Sultanzai Khwar. The march is generally easy and practicable both for laden camels and mules. Camels can also proceed the whole march up the <i>nala</i> bed, but this would be somewhat longer. Height of camp p2,675.

Route No. XVI.
FROM GANDARI KACH TO KASHMIR KAR POST.

No. of Stage.	Names of Stages.	DISTANCES.		Remarks.
		Inter-mediate.	Total.	
1	KASHMIR KAR ...	$7\frac{3}{4}$	$7\frac{3}{4}$	The road on leaving camp leads off from the Zao defile some $2\frac{3}{4}$ miles west of Gandari Kach and follows the bed of a <i>nala</i> which turns sharp north from the Zao defile for 50 yards, and then turns north-west through a sort of natural gateway formed by vertically stratified rocks extending into the <i>nala</i> bed. For 200 yards the valley is an open river bed about 30 yards wide with low hills on either side. It then turns suddenly southwest and enters a <i>tangi</i> with precipitous sides some 20 feet wide. After 100 yards it narrows to 10 feet and the water flows through the centre in a rounded saucer-shaped fall not more than 3 feet high. From here it slightly widens and winds generally north-west for another 200 yards, when the gorge is blocked by a black slippery rock 18 feet high—a serious obstacle for man and impassable for any animal. The gorge having precipitous sides there is no way round. This obstacle once climbed the bed is good going, the rest of the way being dry, wide, and stony. Grass growing in abundance. The bed rises very steeply, the incline being quite perceptible to the eye, and passes through low broken hills, receiving many small <i>nalas</i> on either side. This rock passed, the general direction is north-west for $\frac{3}{4}$ mile, where a smaller <i>nala</i> joins from the north. The river bed then turns west and is about 50 yards wide. After one mile a large <i>nala</i> from the south is met. Water is met with $\frac{1}{2}$ mile further on. At $5\frac{3}{4}$ miles a smaller <i>nala</i> runs in from the north-west, while the main stream narrowing very much runs south. 300 yards beyond this some rocks with a fall of about 4 feet block the road, though a path can be made on the south bank. A little water here. At $6\frac{1}{4}$ miles the path leaves the <i>nala</i> bed, and turning abruptly north up the hillside leads up a very steep zigzag on the hillside for $1\frac{1}{2}$ miles, and at $7\frac{3}{4}$ miles the post of Kashmir Kar is reached on the hill top. The post is garrisoned by Miani levies, is built of mud, and has an officer's room. Water slightly aperient but quite drinkable. From here a good road leads in a north direction to Nilai Kach in the Gomal, distant about 11 miles, and a rough path runs to Khajuri Kach. Height of Kashmir Kar 4,800'.